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ABSTRACT

Six papers presented at a conference on early childhood first and second language acquisition sponsored by the California state legislature's Child Development Programs Advisory Committee include: "Bilingual Development and the Education of Bilingual Children During Early Childhood" (Eugene E. Garcia); "An English-Only Preschool Program" (William Lambert); "A Brief Case for Bilingual Preschools" (David P. Dolson); "Second-Language Learning in Early Childhood: Some Thoughts for Practitioners" (Barry McLaughlin); "The Intellectual Power of Bilingualism" (Rafael M. Diaz); and "A Spanish-Language Preschool Program" (James Campos). Recommendations for policy, program, and curriculum development based on current research findings are included. A bibliography and a list of advisory committee members are appended. (MSE)

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Second Language Learning by Young Children

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State of California

CHILD DEVELOPMENT PROGRAMS
ADVISORY COMMITTEE

915 Capitol Mall, Room 250
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October 7, 1985

This report, **Second Language Learning by Young Children**, is the fourth to come from our Special Needs Subcommittee since 1981. That year the Committee published "Services for Young Children of Migrant Farmworkers." In 1982 we completed "The Developmental Needs of Young Bilingual Children." Next came "The Child Care Needs of Young Disabled Children" which was recently reprinted as part of the hearing record of the House of Representatives' Select Committee on Children, Youth, and Families.

In this report on second language learning the Committee brings together scholarly findings and practical approaches. The report reprints six of the presentations given during a two-day conference in Fresno last April. (Other presentations are available on video tape from the Committee office.) We hope that these materials will be useful to child care personnel in their staff development activities.

The report also contains the Committee's recommendations: to child care professionals, to associations, to the research community, and to state agencies. While there is much that we do not know about young children's second language learning, there is a surprising amount that we do know. We encourage programs for young children to apply that knowledge.

The publication of this report coincides with an event that the Committee marks with special tribute. Vivian Weinstein is retiring from her professorship of pediatrics at the Charles R. Drew Postgraduate Medical School. It was my pleasure to serve on the Advisory Committee with her for eight years. While a member of the Committee, she began the work that culminates in this report; this is just one of many contributions she has made to children's services since her career began in 1936.

Earl G. Peterson

Earl G. Peterson
Chair

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PREFACE

Two years ago, the Special Needs Subcommittee completed a study of the child care needs of children with disabilities. In discussing new directions for the subcommittee, members began to focus on infants who were in child care and whose families spoke little or no English at home. Subcommittee members were aware of models for preschool age children in Head Start: programs that used English only, programs that used the children's mother tongue, and programs that used both languages. But the subcommittee members knew of little work on infant programs.

Before setting out to discover research on these infants, the subcommittee broadened its inquiry to include infants from English speaking households as well: what does research tell us about their potential to master a second language while in a child care setting?

The subcommittee then formulated a plan, which the Committee approved, to establish a project to:

- *identify the research on infants' language acquisition
- *establish a resource bank of research and other pertinent materials
- *host a conference to bring researchers together with infant care providers
- *issue a report summarizing the conference proceedings, the areas of agreement between practitioners and researchers, and the Committee's recommendations
- *focus recommendations on State policy, on directions for future research, and on State administrative practice
- *work with the State Department of Education's Child Development Division on next steps for state-funded child care and development programs and for CDD field personnel.

With Committee approval, the subcommittee sought funds for these activities. Willa Pettygrove prepared a grant proposal which the Rosenberg Foundation accepted. Thanks to the Rosenberg Foundation grant, the Committee hired Margarita Tempes to coordinate the project. Committee members Vivian Weinstein, Sai-Ling Chan-sew, and Audrey L. Smith worked with other interested persons to plan and carry out the project between December, 1984, and the conference in Fresno in April of 1985.

Honing the report and shaping the recommendations have been the work since then of Committee members Sai-Ling Chan-sew, Paula Allen, and Edith Brandenburger, joined by Sally Hinton and Barbara Tardif, liaisons to the Committee from the Division of Special Needs in the State Department of Education and the Commission for Teacher Credentialing. The Committee also extends its appreciation to Dr. Robert Cervantes, director of SDE's Child Development Division, who supported the project from its inception, assisted with the conference planning, and is sharing the major responsibility for carrying out the Committee's recommendations.

INTRODUCTION

Within child care, the area experiencing the most rapid growth and the most commonly expressed need is group care for infants. In the past decade, the greatest increase in labor force participation has been among mothers of infants and children under the age of three. At the same time, changes in family structure and economic pressures have reduced the child care resources within families. As more women enter the labor force, fewer grandmothers, sisters, and aunts are available to care for the young child of a woman in the labor force.

Demand for out of home infant care is increasing for cultural groups that have traditionally depended on the extended family. Also, within the past decade, California has experienced the arrival of new immigrant families from various language groups. The adults in these new immigrant families join the work force quickly, and their young children below school age are often in group child care. One example is farm labor. Language minority groups comprise a large number of the migrant workers employed in agriculture in California. In the past ten years, the need for infant child care programs that serve migrant families has doubled. In response, the State's subsidized child care system now includes 19 infant centers in migrant farm labor housing camps. 625 children under the age of three attend these centers.

In 1983, the State Department of Education estimated that 11% of the children receiving subsidized care were under three years of age; approximately 7,000 infants, on any given day, receive subsidized child care services. The Department further estimated that 36% of the children in subsidized care are Hispanic and 4% are Asian. While the 1983 report included no estimate of the number of limited-English-proficient children in care, in a 1979 census, the Department found that 15% of the children in subsidized programs were not English speaking.

As more and more infants are cared for away from home, it is the concern of the Child Development Programs Advisory Committee to consider how this care affects and facilitates the development of infants and very young children. For all infants and young children in care, the Committee asks how best to develop their linguistic and cognitive capacities; for the infants and young children from families that do not speak English, the Committee asks what role the child care program's language policy and practice can play in the children's development; for the infants and young children in care who are from English-speaking families, the Committee asks what potential there is for the child care setting to teach a second language while increasing the child's use and mastery of English.

While extensive research and experience with elementary school programs have demonstrated the linguistic and cognitive consequences of early bilingualism, there has been much less attention given to the bilingualism of infants and toddlers, and there has been much less attention on models for early childhood education and child care programs.

In designing and undertaking this project, the Advisory Committee began with no preconceived ideas about the best approach to take with either English-speaking or non-English-speaking young children. With a grant from the Rosenberg Foundation, the Advisory Committee conducted a project to research the ways in which to provide optimum language development in child care services for infants and young children. In particular, the Committee focused on locating the research on young children from families who do not speak English.

As part of this project, the Committee organized and hosted a conference on early childhood first and second language acquisition that focused on:

*The language minority infant and first language development
*Second language acquisition for the language minority infant and young child
*Second language acquisition by infants from English speaking families
*The relationship of early bilingualism to the cognitive, social, and future linguistic development of young children.

A group of researchers and practitioners in the areas of linguistics, child development, education, psychology, sociolinguistics, psycholinguistics, and social anthropology was invited to present their findings and discuss their views with infant care and child care program specialists. Hence, this report is based mainly on extant research, and it presents an alternative to the exclusive use of folk linguistics, intuition, or political judgements as a basis for making educational decisions affecting very young children in California's child care programs.

The Committee gave each presenter and each conference participant a set of questions to ponder, to address, and to discuss. While lengthy, the questions pose a policy agenda as well as a research agenda.

*Should the home language be maintained in child care programs and preschools?
*Should infants and very young children be surrounded by English only in the child care and preschool settings?
*Should the program design of such institutions include cognitive development in the mother tongue as well as in English?
*Should the home language be maintained while gradually introducing English?
*Since more and more infants and young children are being cared for in state subsidized agencies, is this the best opportunity to have minority language infants and young children acquire English? How would "English only" affect their cognitive development and their overall social development?
*Why would it be preferable to immerse minority language young children in "English only" programs?
*What are the differences between introducing English as

a second language and introducing another language as a second language in the U.S.A.?
*What are the advantages of early bilingualism?
*What is the potential for second language acquisition for the majority language infant and young child?
*What should be done to assist limited English proficient children who are from unusual language groups?

Needless to say, the conference did not arrive at definitive answers to all of these questions, but presenters and participants discussed each of them, compared research conclusions with professional experience, and ended the conference with directions for their next research or their upcoming curriculum planning.

The next section of this report includes most of the papers presented at the conference. Preceding each is a summary of the paper. Following the papers are the Advisory Committee's conclusions, formulated as recommendations for researchers, practitioners, State government, and the Committee itself. The report concludes with a bibliography of the texts most helpful to the Committee in arranging the conference.

CONFERENCE PAPERS

Opening Three Papers: Three Contrasting Approaches

The conference opened on Friday evening, April 20, with welcoming remarks by Sai-Ling Chan-sew, Ken Jaffe, and Vivian Weinstein of the Advisory Committee.

Robert Cervantes, director of the Child Development Division of the Department of Education and a member of the Advisory Committee, framed the issues and moderated the panel.*

Eugene Garcia, of Arizona State University, was asked to present a summary of research on bilingual approaches to early education; William Lambert, of the United Teachers of Los Angeles, was invited to present research on programs that immerse young children into English-only settings; David Dolson, of the California State Department of Education, was asked to present research done on programs which use young children's mother tongue.

In the first paper, Professor Garcia begins with a thorough summary of research and research findings. He approaches the subject from the point of view of teachers of young children, pulling from research those conclusions which teachers can apply in child care settings. He finishes the essay by identifying unresolved and pressing issues for educators whose students come from language-minority families.

William Lambert was invited to present research on English-only programs for young children from households in which English is not spoken. Instead of presenting research, Mr. Lambert discussed a bill before the California State Legislature which would establish pilot programs for non-English speaking four-year olds. These half-day, school-year programs would be taught by elementary school teachers with credentials in teaching English as a second language (ESL). Mr. Lambert submitted the actual legislation as the text of his remarks for this report.

David Dolson was invited to present research findings on early education approaches which emphasize language development in a child's mother tongue. Readers interested in this specific topic should also read James Campos's paper later in this report.

*A video tape of this opening session is available from the Committee office.

BILINGUAL DEVELOPMENT AND THE EDUCATION OF BILINGUAL CHILDREN DURING EARLY CHILDHOOD

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INTRODUCTION

The issues surrounding bilingualism are of specific interest to a large bilingual segment (Mexican-American, Chinese, Haitian, Native American, Puerto Rican, Cajun, Vietnamese, etc.) of this nation's population (U. S. Commission of Civil Rights, 1974) and, of general interest to those individuals studying the general phenomenon of language acquisition (McNeil, 1966). Other reviews of bilingualism and second language acquisition have dealt with the definition of bilingualism, linguistic overlap, linguistic "interference," cognitive interaction, and theoretical issues related to each of these areas (See MacNamara 1967; Cummins 1979; and Garcia 1983). The purpose of the present review is to discuss some of these same issues in light of more recent research and applied information specific to bilingual development in young children with special attention to bilingualism in the United States. Therefore, this review should (a) serve as an update from earlier reviews in this area, (b) provide some functional information to those individuals concerned with early childhood bilingualism, and (c) elucidate certain areas which are in need of immediate attention in the context of bilingual instruction in the United States.

Not so surprisingly, as one searches for a comprehensive definition of bilingualism, a continuum of definitional attempts unfold. On one end of this continuum are general definitions such as "the practice of alternately using two languages." At the other end of this continuum are the operational definitions common to the field of experimental psychology ("subjects answered positively to question concerning their use of two languages"; "subjects scored 90% on a standardized test of language proficiency in each language"; etc.). Regardless of the definition adopted for any empirical or theoretical treatment of bilingualism, it should be apparent that "bilinguals" come in a variety of linguistic shapes and forms. Therefore, any definition worthy of consideration must address this built-in linguistic complexity. Thorough definitions of bilingualism must additionally consider cognitive and social domains: the acquisition of language or language coincides with identifiable periods of cognitive development within significant social contexts.

Early childhood bilingualism defined. The term bilingualism here suggests the acquisition of two languages during the first five years of life. This definition includes the following conditions:

(a) Children are able to comprehend and/or produce linguistic aspects of two languages.
(b) Children are exposed "naturally" to the two systems of languages as they are used in the form of social interaction during early childhood. This condition requires a substantive bilingual environment. In many cases this exposure comes from within a nuclear

and extended family network but this need not be the case (visitors, and extended visits to foreign countries are examples of alternative environments).

(c) The simultaneous character of development must be apparent in both languages. This is contrasted with the case of a native speaker of one language, who after mastery of that language, begins on a course of second language acquisition.

It is the preceding combined conditions which define the present population of interest. It is clear from this definition that an attempt is made to include the child's linguistic abilities in conjunction with the social environment during an important "developmental segment" of life.

BILINGUAL DEVELOPMENT

Certainly, one of the most impressive characteristics of children's development is related to language acquisition. It seems remarkable that within the first few years of life, drastic changes in linguistic competence can clearly be identified (Menyuk, 1971). Although the exact variables influencing this development are still not evident, research in this field has been voluminous and theoretically varied (Lenneberg and Lenneberg 1975, DeVilliers and DeVilliers 1978). The main focus of this research has centered on single language acquisition (Brown 1973) although some research has employed comparative linguistic analysis with children who are learning different languages (Bowerman 1975, Braine 1976). Compared to these bodies of literature, a much smaller set of systematic investigations are available regarding children who are acquiring more than one language, simultaneously, during the early part of their lives.

It does seem clear that a child can learn more than one linguistic communicative form in many societies throughout the world and many children do so. Sorenson (1967) describes the acquisition of three to four languages by young children who live in the Northwest Amazon region of South America. In this Brazilian-Columbian border region, the Tukano tribal language serves as the *lingua franca*, but there continues to exist some 25 clearly distinguishable linguistic groups. In the United States, Skrabanek (1970) reports the continued acquisition and support of both English and Spanish language systems among young preschool children of our Southwest for the last hundred years with no indication that this phenomenon will be disrupted.

Although not apparent from a cursory scanning of linguistic literature, research with bilinguals is not a recent subarea of linguistic or psychological interest. Ronjat (1913) reports the development of French and German in his own son. Finding little deleterious effects of bilingual development, he attributed such positive outcomes to the separation of the languages. In this particular case, one parent consistently spoke French and the other German. Pavlovitch (1920) also reports the development of two languages, French and Serbian, in his son. Similarly, languages were separated across individuals and the languages developed simultaneously with minimal confusion. Geissler (1938) reports, anecdotally, that as a teacher of foreign languages he had observed young children acquire up to four languages simultaneously without apparent difficulty. However, Smith (1935), in a study of missionary families who spoke English and Chinese, reports difficulty during simultaneous acquisition. This difficulty was most apparent in the language mixing character of some children's speech.

One of the first systematic investigations of bilingual acquisition in young children was reported by Leopold (1939, 1947, 1949a, 1949b). This author set out to study the simultaneous acquisition of English and German in his own chapter. These initial descriptive reports indicate that as the subject was exposed to both languages during infancy, she seemed to weld both languages into one system during initial language production periods. For instance, early language forms were characterized by free mixing. Language production during later periods seem to indicate that the use of English and German grammatical forms developed independently.

More recent studies have systematically addressed several issues relevant to bilingual acquisition. Carrow (1971, 1972) has restricted her study to the receptive domain of young bilingual Mexican-American children in the Southwest. Children (ages 3 years, 10 months to 6 years, 9 months) from bilingual Spanish-English home environments were administered the Auditory Test for Language Comprehension. This test consists of a series of pictures representing referential categories that can be signaled by words, morphological constructions, grammatical categories and syntactic structures. These include verbs, adjectives, adverbs, nouns, pronouns, morphological endings, prepositions, interrogatives and syntactic complexity in both languages. A comparison of English and Spanish comprehension on this task for bilinguals revealed (Carrow 1971): (1) linguistically, children very heterogeneous; some scored better in one language than another, others were equal in both; (2) a greater proportion of children scored higher in English than in Spanish; (3) older children scored higher on these measures in both languages. (This was the case even though Spanish was not used as a medium of instruction for children who were in educational programs).

In a cross-sectional comparison of English comprehension among monolingual English and bilingual, Spanish-English children (ages 3 years, 19 months to 6 years, 9 months), Carrow (1972) reports a positive developmental trend for both Spanish and

English in bilingual children. Additionally, bilingual children tended to score lower than monolingual children on English measures during ages 3 years, 10 months to 5 years, 9 months; but for the final age comparison group (6 years, 9 months), bilingual and monolingual did not differ significantly on these same English measures. These combined results seem to indicate that at the receptive level, Spanish-English bilingual children were: (a) progressing (increasing their competence) in both Spanish and English; (b) heterogeneous as a group, most favoring one language (typically English) over another; and, (c) "lagging" behind monolingual children in their acquisition of English at an early age (4-5), but eventually "catching up" at a later age (6-7). Since these studies were only at the receptive level, used specific "test" procedures, and restricted the population of study to one regional bilingual Hispanic population (Texas Mexican-Americans), there exist serious constraints to the conclusion reported above. But, they do offer some initial empirical information relevant to the study of early childhood bilingual development.

With respect to expressive development, Padilla and Liedbman (1975) report the longitudinal analysis of Spanish-English acquisition in 2, 3-year old bilingual children. These researchers followed the model of Brown (1973) in recording linguistic interactions of children over a five month period. By an analysis of several dependent linguistic variables (phonological, grammatical, syntactic and semantic characteristics) over this time period, they observed gains in both language though several English forms were in evidence while similar Spanish forms were not. They also report the differentiation of linguistic systems at phonological, vocabulary and syntactic levels. They conclude:

> the appropriate use of both languages even in mixed utterances was evident; that is, correct word order was preserved. For example, there were no occurrences of "raining esta" or "a es baby," but there was evidence for such utterances as "esta raining" and "es a baby." There was also an absence of the redundants of unnecessary words which might tend to confuse meaning. (page 51)

Garcia (1983) reports developmental data related to the acquisition of Spanish and English for Spanish-English bilingual preschoolers (3-4 years old) and the acquisition of English for a group of matched English-only speakers. The results of that study can be summarized as follows: (a) acquisition of both Spanish and English was evident at complex morphological (grammatical) and syntactic levels for Spanish/English four-year-old children; (b) for the bilingual children studied, English was more advanced based on the quantity and quality of obtained morphological and syntactic instances of language production; and (c) there was no quantitative or qualitative difference between Spanish/English bilingual children and matched English-only controls on English language production.

Huerta (1977) has provided a report of a longitudinal analysis for a Spanish/English, bilingual, two-year-old child. She reports a similar pattern of continuous Spanish/English development, although identifiable stages appeared in which one language forged ahead of the other. Moreover, she reports the significant occurrence of mixed language utterances which made use of both Spanish and English lexicon as well as Spanish and English morphology. In all such cases, these mixed linguistic utterances were well formed and communicative. Garcia, Maez and Gonzales (1981), in a national study of bilingual children four, five, and six years of age, found regional differences in the relative occurrence of switched language utterences. That is, bilingual Spanish/English children from Texas, Arizona, Colorado and New Mexico, showed higher (15-20%) incidences of language-switched utterances than children from California, Illinois, New York or Florida, especially at prekindergarten levels. These findings suggest that some children may very well develop an "interlanguage" in addition to the acquisition of two independent language systems later in development.

The above "developmental" findings can be capsulized succinctly but not without acknowledging their tentative nature:

1. The acquisition of more than one language during early childhood is a documented phenomenon.
2. The acquisition of two languages can be parallel, but need not be. That is, the qualitative character of one language may lag behind, surge ahead, or develop equally with the other language.
3. The acquisition of two languages may very well result in an interlanguage, incorporating the aspects (lexicon, morphology and syntax) of both languages.
4. The acquisition of two languages need not hamper, developmentally, the acquisition of either language.

Of course, these conclusions are very broad in character. The specific nature of bilingaul development and its casual links to environmental variables remains unavailable.

Beyond the basic developmental research discussed above, a second popular form of research has considered the interactive influence of multiple language acquisition. That is, does learning more than one language influence the rate and/or quality of acquisition of each language? When referring to the interactive phenomenon between languages of the bilingual, the terms "linguistic transfer" or "interference" are often used. This latter form has gained multiple meanings as is shown by its gain or various modifiers, "linguistic interference," "psychological interference," and "educational interference" (Saville and Troike, 1971). Experimental studies of specific instances of "transfer" or lack of it are available with bilingual children. For instance, Evans (1974) reports the comparison of word-pair discriminations and word initiations in Spanish and English for monolingual English and bilingual Spanish/English children.

Elementary school children were asked to discriminate between words containing English phonemes /b/ and /y/ which are clearly separate in English but not so clearly separate in Spanish. Additionally, children were requested to initiate a series of words in each language which were also considered "difficult." Bilinguals did not differ from monolinguals on any of the English tasks. But as expected, bilinguals scored significantly higher than monolinguals on all Spanish tasks. Garcia and Trujillo (1979) report a similar finding when they compared bilingual (Spanish/English) and monolingual (English) three, four, five, six, and seven-year olds on high error risk English phonemes that adult Spanish speakers mispronounce. In addition, these children also were asked to imitate simple to complex Spanish and English syntactic forms (sentences containing plural, possessive, and adjective morphemes). Bilinguals did not differ from monolinguals on English imitation tasks where both groups scored near 100% correct, but they did differ significantly, and made fewer errors than English speakers on Spanish tasks. This was true across all age levels. These studies suggest that negative transfer at the phonological level in young bilingual children is nonexistent.

In this same study (Garcia and Trujillo, 1979), however, the imitation of complex Spanish sentences which involved adjective placement were not imitated correctly by the bilingual subjects. Complex English sentences of this type presented no significant problem for either bilingual or English-only children. Recall that adjective placement in Spanish ("pato azul") generally differs from adjective placement in English ("blue duck"). Therefore, it is likely that transfer (both positively and/or negatively) increases with the increase in syntactic complexity and as differences in syntactic structure across the language of the bilingual are involved. An earlier report (Garcia), 1977) has indicated the existence of transfer in the form of language substitution during the acquisition of prepositional labels in the "weak" language of the bilingual. In this study, bilingual, Spanish/English children whose performance on the labeling of prepositional concepts differed across languages served as subjects. That is, subjects could provide the correct prepositional label in one language (first language) but not the other (second language). Language substitution occurred when subjects were taught to label prepositions in the second language. Therefore, transfer may very well take the form of a "failure to discriminate" the language deemed socially appropriate. Such transfer effects are more sociolinguistic in character rather than linguistic.

On the other hand, Dulay and Burt (1972, 1973) report finding the linguistic errors in English which could be attributed to children's first language even when the child's first language varied from Oriental to a Western European derivative. They have concluded that identifiable English linguistic errors were much like those of young children acquiring English as a first and only language.

The studies in the field of linguistic transfer with young bilingual children can be used to support one or more of the following contradictory conclusions concerning the acquisition of two languages during early childhood:

1. A linguistic transfer phenomenon is evident in which the specific structure of the "dominant" language influences the developmental quality of the less "dominant" language.
2. A linguistic transfer phenomenon is evident in which the structures of the two independent languages influence the developmental quality of both languages, likely producing a third identifiable "interlanguage."
3. The developmental character of the bilingual is not significantly influenced by the simultaneous linguistic development of two languages; the developmental character of each language is similar to that of a native speaker of either language.

Given the contradictory nature of the evidence available at this time, it is safest to conclude that the specific character of transfer between the languages of the bilingual continues to be an area of significant research interest and controversy. It would appear inappropriate at this time to make any other conclusion.

SOCIAL CONTEXT

As Reigel (1968) suggests, any chronological record of the child's linguistic output coupled with linguistic input information would allow us important correlational analysis of language development. Although this extensive information remains unavailable, some systematic semblance of this type of data is becoming available for monolingual English children (Brown and Fraser, 1963; Schacter, Krishner, Klips, Friederricks, Sander, 1974). Unfortunately, little information of this calibre is available for young bilingual children.

Although this absence of empirical data is crippling, some cautious notions of bilingual input seem justifiable. If one considers the eventual bilingual character of the child, it seems appropriate to suggest that some percentage of the child's linguistic information is in one language and some other percentage is in a second language. One might tie the acquisition of either language to the general theoretical notion of "degree of linguistic input." Mathematically, the extent of bilingualism would be directly related to the proportion of language information made available.

This simple relationship must be qualified because of several theoretical and empirical considerations. Edelman (1969) reports the differential use of Spanish and English vocabulary in Puerto Rico children on a word-naming task as a function of the different contexts (school, home, neighborhood, church) the children were asked to describe. Skrabanek (1970) in a study of Spanish maintenance among Mexican Americans, found that the use of Spanish differed as a function of the age of the speaker. Older subjects spoke more often in Spanish although both young and old alike used Spanish a substantial proportion of the time. Kuo (1974) reports the differential use of language by Chinese-American children was related to age and other socialization variables.

Language is learned within a child's culture, and children coming from different cultures will use language in ways that reflect their different cultures. This particularly is the case for bilingual children, children where social functioning takes place in two languages. For example, a child from a Mexican American or Native American Family will not necessarily talk about the same things, or use language to accomplish the same functions as a child from an urban Black or Anglo family. The key term here is "language use." It is important that we distinguish between the form of a child's language and the function served by that language. Language form (phonology, syntax, grammar, and vocabulary) has been the traditional focus of language intervention for children. More than a decade ago, William Labov (1970) identified this duality in his own research when he identified two aspects of the problem:

> 1. Structural conflicts of standard and nonstandard English: interference with learning ability stemming from a mismatch of linguistic structures.
>
> 2. Functional conflicts of standard and nonstandard English: interference with the desire to learn standard English stemming from a mismatch in the functions which standard and nonstandard English perform in a given culture. (p. 6)

Labov's research focused on both of these issues, and he identified numerous functional conflicts between the nonstandard English of the urban black children he studied and the standard English demanded by the school. Duran (1981) and Garcia (1983) as well as others provide a wealth of similar information for Spanish/English bilingual populations. Unfortunately, curriculum developers and language testers are often slow to take advantage of these results. For example, Labov found that many of the children he studied were unwilling to answer questions which the questionner obviously knew the answer to. An adult, holding up a picture of a helicopter and saying to a child "What's this?" is likely to get either no answer or "I don't know." It is impossible to say in this situation whether the child really doesn't know, or whether the child is reasoning "That question is too easy. Anybody knows what that is. There must be some catch to this. I will protect myself by not answering until I know more about what's going on here." This protection-strategy is frequently employed by urban black children, and yet their silences or "don't know" answers are interpreted as evidence of cognitive or language delay. Geneshi (1981) in a study of bilingual Mexican American children in California, gives further weight to Labov's example. She points out that the children in her study switched languages (from English to Spanish or vice-versa) depending on their own impression of the listener's "strongest" language. She reports that what seemed at first glance a disturbed language switching situation, became a systematic interactional discourse strategy which maximized communication.

Therefore, this willingness to use more than one language in performance situations can cause real problems in traditional testing situations in which it is clear that there is one right language, and the tester knows what it is.

Functional Language. Functionalist approaches to language acquisition theory are not a recent development. In 1970, Casden wrote:

> The study of the acquisition of language has been based on the assumption that what had to be described and

> explained was the acquisition of a repertoire of responses (in the terminology of behaviorism) or the acquisition of a finite set of rules for constructing utterances (in the terminology of developmental psycholinguistics). On this assumption, the school language problems of lower class children can have two explanations: either they have acquired less language than middle class children, or they have acquired a different language. The less-language explanation has been given various names - cultural deprivation, deficit hypothesis, vacuum ideology - all with the connotation of a nonverbal child somehow emptier of language than his more socially-fortunate age mates. The different-language explanation is forcefully argued by William Stewart and Joan Baratz. It states that all children acquire language but that many children - especially lower-class black children - acquire a dialect of English so different in structural (grammatical) features that communication in school, both oral and written, is seriously impaired by that fact alone. ,..Both the less-language and different language views of child language are inadequate on two counts. First, they speak only of patterns of structural forms and ignore patterns of use in actual speech events. Second, they speak as if the child learns only one way to speak, which is reflected in the same fashion and to the same extent at all times. On both theoretical and practical grounds, we can no longer accept such limitations. (p. 81,83)

What Cazden is calling for is a functional view of language - a focus on how the child brings language to bear to meet the demands of the situations in which language is used.

The key to this approach is the notion that grammatical structure cannot be understood outside the context in which language is used (Bloom, 1970). The functionalist approach to language holds that grammar is a secondary or derived system, related to the constraints of the communication task. As Bates (1979) indicates, "the child's acquisition of grammer is guided, not by abstract categories, but by the pragmatic and semantic structure of communications interacting with the performance constraint of the speech channel." The child's task is one of mapping a diverse set of semantic and pragmatic functions onto a set of grammatical forms. A functional approach suggests children concentrate first on what they can do with language. Cultural diversity in language becomes increasingly significant. In other words, a functional approach makes us interested in what Hymes (1967) calls the child's "communicative competence" -- that is the child's knowledge of rules of speaking meaningfully. If we wish to assist in developing a child's knowledge of constructs beyond subject-verb agreement and past-tense verbs, that is if we want to know whether children can use language functionally in the environment, then we need a non-traditional language view. Moreover, even if we wish to identify and implement instructional procedures related to "linguistic competence", our methods must inherently link to communicative functions.

The study of language in context is known as pragmatics. As Bates (1976) indicates "all of language is pragmatic to begin with. Children choose their productions to fit contexts and procure knowledge of communications onto those contexts in such a way that the two are inseparable." Bates' approach demands that we think of context as involving information about the speaker, the listener, the speaker's goal in using a particular utterance, the information assumed to be true in a particular speech context, and even the rules governing discourse of conversation.

Useful accounts of early childhood bilingualism must, therefore, take into consideration more than the child's linguistic ability. They must consider the child's surrounding environment. The environmental context will determine.

1. the specific linguistic and meta-linguistic information important for the development of each language;
2. the specific social language use rules for each language;
3. the specific linguistic and sociolinguistic rules governing codeswitching;
4. prestige of the language, and, therefore, the "motivation" to learn-maintain, or ignore-dissipate language differentially.

This form of analysis is one of the most needed within the bilingual arena. It is also one which holds much promise in providing information drawn directly from bilingual acquisition but of direct importance to the understanding of language acquisition in general. For as McNeil (1966) has previously indicated, differential development of specific language features in the course of bilingual acquisition may very well signal important relationships between that differential development and socio-cultural variables.

INTELLIGENCE, COGNITION, AND BILINGUALISM

Social input and linguistic output have been discussed as they are related to bilingual acquisition in early childhood. Left unattended, however, have been the cognitive processes related to this same issue. Based on information relating early childhood bilingualism to decreased performance on standardized tests of intelligence, a causal statement linking bilingualism to depressed intelligence is tempting. Although this pervasive negative relationship characterizes much early work (Darcy 1953), the methodological problem of studies investigating this type of relationship are serious and any conclusions concerning bilingualism and intellectual functioning (as measured by standardized individual or group intelligence tests) are extremely tentative in nature (Darcy 1963).

With the general shift away from standardized measures of intelligence, the information processing of bilingual children as it is related to specific areas of cognitive development has received attention. Leopold (1939) in one of the first investigations of bilingual acquisition with young children reported a general cognitive plasticity for his young bilingual subject. He suggested that linguistic flexibility (in the form of bilingualism) generalized to non-linguistic, cognitive tasks. Peal and Lambert (1962) in a summarization of their work with French/English bilinguals and English monolinguals suggested that the intellectual experience of acquiring two languages contributed to an advantageous mental flexibility, superior concept formation, and a generally diversified set of mental abilities. Padilla (1977) reasoned that bilinguals must be cognitively advanced because they are able to process information, and produce allied information in another language. (I refer here to the ability of a child to understand a problem statement in one language, solve that problem, and produce the answer in a second language). For example, Keats and Keats (1974) report a study which German/English bilinguals who did not exemplify weight conservation were trained to conserve in one of the two languages. Results from English and German post-tests indicated that the concept was acquired in both languages. This suggests the possible increased flexibility of bilinguals during conceptual acquisition.

Feldman and Shen (1971), Ianco-Worall (1972), Carringer (1974), and Cummins and Gulatson (1974) have begun to provide relevant evidence. Feldman and Shen (1971) report differential responding between Spanish/English bilinguals and English monolinguals across three separate cognitive tasks. The first, an object constancy task, required subjects to identify an object (a cup) after its shape had been altered (smashed) in their presence. The second, a nonsense labeling and switched-name task, required subjects to label familiar items with either nonsense words ("wug") or to switch the names of these familiar items (label a cup a "glass" and vice versa). The third, an associative sentence task, required subjects to use familiar, nonsense and switched labels (of the second task) in a sentence describing a relation between the labeled items ("the wug is on the plate"). Results indicated significantly increased cognitive flexibility for bilinguals. Ianco-Worall (1972) compared matched bilinguals (Afrikaans/English) and monolingual (either Afrikaans or English) on separation of word-sound, word-meaning tasks. Comparison of scores on these tasks indicated that bilinguals concentrated more on attaching meaning to words than on sounds.

In an attempt to identify more specifically the relationship between cognition and bilingualism, Cummins (1979, 1981) has proposed an interactive theoretical proposition: that children who achieve "balanced proficiency" in two languages are advantaged cognitively in comparison with monolingual children, and that children who do not achieve balanced proficiency in two languages (but who are immersed in a bilingual environment) are cognitively disadvantaged in comparison to monolingual and balanced proficient bilinguals. This formulation presents most directly the shift away from a disadvantaged perspective (Darcy, 1953, 1963) to an advantaged perspective while at the same time continuing to consider the potential negative influence of bilingualism (unbalanced). This interactionist position attempts to account for the success of Canadian-French immersion bilingual programs for English-speaking children and the failure of English immersion programs for Spanish-speaking children in the United States.

Garcia (1983) takes issue with this interactionist conceptualization on several grounds. First, the data to support the interactionist position are primarily Canadian. Secondly, these same data have prevously been criticized on a more severe subject selection criterion. It is likely that only high achieving and highly intelligent children were selected for inclusion into bilingual education groupings. Therefore, cognitive advantages already existed prior to bilingual "instruction" and most likely contribute to the success of bilingual development, not vice versa. Moreover, successful subjects came from either majority, middle or high socio-economic strata where education was a premium and learning a second language was openly rewarded. Learning a second language under such conditions is quite different from one dictated by economic depression as well as social and psychological repression of a minority language and culture. In sum, it is not necessary to account for differences in bilingual (balanced or not) and monolingual's cognitive performance in the basis of a cognitively advantage/disadvantaged conceptualization. Instead, it remains possible that individual differences in intellectual functioning, combined with the support/non-support of the social context for acquiring linguistic and academic skills, are the factors responsible for any specific differences in bilingual and monolingual performance on cognitive measures.

In sum, any detailed conclusions concerning the relationship between the bilingual character of children and cognitive functioning must remain tentative. It is the case that:

1. Bilingual children have been found to score both higher and lower than monolingual children on specific and general measures of cognitive development, intelligence and school achievement.

2. "Balanced" bilinguals have outperformed monolinguals and "unbalanced" bilinguals on specific cognitive tasks.

3. Specific hypotheses relating bilingualism to cognitive and intellectual functioning have been advanced (Darcy, 1953, 1963; Cummins, 1979).

Like so much of the data in the bilingual area, these data must be perceived as tentative, and must be considered as further evidence of the need for more specific research concerning the relationship between language and cognition.

IMPLICATIONS FOR BILINGUAL EDUCATION IN EARLY CHILDHOOD

It is almost universally accepted that language and social repertoire have their origins in early childhood years. It seems that almost all the basic linguistic skills (phonology, morphology, syntax) of adult language as well as important personal and social attributes (self-concept, social identity social interaction styles) are significantly influenced during these years. Consequently, one motive for early educational intervention has been the potential removal of barriers related to the development of these important linguistic, psychological and social attributes. With respect to early childhood programs for bilinguals, it would be important to recognize the linguistic and cultural character of these children in any such effort. In 1974, the U.S. Commission on Civil Rights spoke directly to issues of language diversity and education by stressing the importance of early childhood instruction incorporating the native language of the children it serves. Put directly, the instructional staff must be able to communicate in the child's native language and the instructional curriculum must also significantly reflect the child's native language.

> When language is recognized as the means for representing thought, and as the vehicle for complex thinking, the importance of allowing children to use and develop the language they know best becomes obvious. (U.S. Commission on Civil Rights, 1974, p.44).

In the line with the above recommendation, the Administration for Children, Youth and Families, Department of Health and Human Services, has initiated a national effort to assist local Head Start centers to "implement sound developmental, bilingual-bicultural programs" (Arenas,1978). Efforts are underway in four areas: curriculum development, staff training, resource network development, and research and evaluation of curriculum development and implementation efforts. The results of the evaluation of these curriculum development efforts are not yet available, but the presence of this overall effort is indicative of the educational relavance of bilingualism to early childhood. As William (1978) has concluded, bilingual education is a natural extension of the maturing of early childhood education and will hold a prominent position in future years.

The bilingual education legislation of 1967-68 began a nationwide trend of great significance. As with many educational trends, this trend had as its impetus social and political forces. It was not based on a long history of sound empirical research related to bilingual development and bilingual education. Instead, it was a movement cognizant of a new hope for bilingual populations who had previously been ignored. It was never clear that bilingual education would provide effective educational programming, but it was clear that the "traditional" program was unsuccessful. Some 10-12 years after this initiative, it seems appropriate to at least briefly review this endeavor and its relationship to specific and related empirical research which it has directly or indirectly spawned. In doing so, we are cognizant of the investigatory paradox: empirical investigations (research) of applied/educational phenomena most often generate more "new" questions without providing substantive answers to questions they are meant to address. Research in bilingual education is no exception to this paradox.

General Implications. The seemingly most direct educationally relevant question reflects the general intent of bilingual education program: Does bilingual education benefit those children it serves to a larger degree than "traditional" educational efforts? Attempts to answer this question have resulted in a body of research literature whose authors are the first to admit that the number of variables influencing the evaluation of bilingual education are formidable. The diversity of the linguistic population. curriculum content, teaching models, program resources, quantity and quality of staffing, and degree of community support do not allow any single statement concerning the differential efficacy of bilingual instruction (as compared to traditional monolingual instruction) possible. This is not to suggest that such evaluative research is unavailable.

Lambert and Tucker (1972) provide one of the few extensive evaluation efforts related to a bilingual education effort. Recall that the program evaluated, "the St. Lambert experiment," involved the total immersion of native English-speaking children in an elementary French schooling experience. Although the formal educational program did not incorporate English as an area of curricular importance, these children continued to live in home environments almost totally dominated by English speakers. The evaluation of the program was longitudinal in nature and obtained several measures of the children's progress academically, linguistically, and intellectually, and compared these with those of children participating in monolingual English and French educational programs who were equated across several relevant indices: (1) age, (2) general intelligence, (3) socioeconomic status, and (4) family motivation for academic success.

The effects of the program were overwhelmingly positive. First, very few substantive differences between experimental (bilingual) and control (English and French) groups were reported across the multitude of measures obtained. Some differences were observed during the first one or two years, especially differences between bilingual and monolingual French groups. But, by the fifth year, no substantive differences in intellectual, academic or linguistic measures were apparent across groups. A later report by Bruck, Lambert and Tucker (1974) on these same groups, after seven years, finds the same pattern of positive results.

It seems difficult to argue with these extremely impressive results. Children who began schooling in a language foreign to their own homes were able to acquire and achieve the same educational objectives in two languages without detrimental effects and within the same temporal period as those children participating in "traditional" monolingual programs. Similar results of programs in Canada have been informally and formally (Barik and Swain, 1975) replicated. Thus, this immersion model has been adopted extensively throughout the French/English-speaking provinces of Canada.

Empirical evaluation of bilingual education efforts in this country are not as clear cut. Cohen (1974) reports one of the first detailed descriptions and evaluations of bilingual programs which involve Mexican-American children. The analysis concerns two bilingual education programs: The Redwood City Project and the Culver City Project.

Redwood City Project. Redwood City, California is a city with a substantially large population of Mexican-Americans. The bilingual education program was not an immersion model. Classes were made up of both Mexican-American and Anglo children; the languages of instruction were Spanish and English. Several academic and linguistic measures indicated the following:

a. Anglo students were comparable to other Anglo controls in measures of English language.

b. Anglo students did poorly on all Spanish measures.

c. Mexican-American students did generally as well as Mexican-American controls on English measures.

d. Mexican-American did better than their controls on Spanish measures.

e. Anglo students generally outscored Mexican-American bilingual and control students on all English measures

Culver City Project. Culver City is a city within the Los Angeles, California area. This project attempted to replicate procedurally and functionally the impressive results of the Canadian program discussed earlier. Spanish was introduced as the language of instruction in Kindergarten for a group of Anglo, native English speaking children. At first grade, Mexican-American, Spanish-speaking children were incorporated into the class. Although this project failed to incorporate appropriate control groups, the following results were reported after first grade between the bilingual immersion group and monolingual English controls:

a. There was no significant difference between the two groups on measures of English language development and reading.

b. There was no significant difference between the two groups on measures of quantitative(mathematics) development.

The results of Cohen's work are not as clear or at least not as comprehensive as those of Lambert. It especially leaves unanswered crucial questions related to the benefits of bilingual education accrued by linguistic minority children, the main target of bilingual education in this country.

A more large scale report evaluation concerning the significance of bilingual education was commissioned by and presented to the Congress of the United States. This project purported to evaluate the specific educational influence of bilingual education programming on linguistic minority children. In effect, it purported to directly answer the important question posed earlier as it relates to the thousands of bilingual children who have participated in the federally funded efforts of the last 10-12 years. In 1974, the Office of Education, Department of Health, Education and Welfare, contracted with the American Institute for Research (AIR) to conduct an evaluation study of major proportion related to the federally funded initiatives in bilingual education. A report of the study design and interim findings which were released in February of 1977 (American Institutes for Research, 1977) sent ripples of praise and criticism throughout the educational community. The study took as its subjects a stratified sample of 38 Spanish/English bilingual education sites which were in fourth or fifth year of federal funding during the 1975-76 academic year. Second through sixth grade classrooms, inclusive of children, teachers, teacher-aides, administrators and parents were considered as providers of important empirical information in the overall evaluative design. For comparison purposes, each Title VII site was expected to nominate non-Title VII classrooms in the same locale containing students matched, as equally as possible, on ethnic background, linguistic competence and socioeconomic status for inclusion in a two-group pretest/posttest design. However, 18 of these sites were unable to identify matched comparison samples. The final evaluation sample consisted of 11,073 students, in 384 classrooms in 150 schools, in 38 separate sites. Moreover, scores on naturally normed achievement tests were used for academic expectancy comparisons.

This effort produced an abundance of information describing critical features of these federally funded projects. Following is a summary of the report:

1. Although 75% of the participants in the bilingual education program included in the study were Hispanic, approximately 60% of these students were judged by their teachers as English dominant.

2. Two-thirds of the bilingual teachers and aides reported themselves to be "native-like" Spanish/English bilinguals. Teacher experience in the program was at a minimum of two years with either a bilingual or regular teacher's credential.

3. The average cost per pupil to the bilingual program was $310 (this was in addition to normal district per-pupil costs).

4. Academic achievement measures indicated:

    a. Average Fall 1975 to Spring 1976 achievement gains in English Language Arts for Title VII Hispanic students were not superior to those on non-Title VII Hispanic students.

    b. Title VII Hispanic students who were judged to be Spanish monolingual by their teachers (for test and questionnaire administration purposes) showed no gains in English Language Arts achievement between pretest and posttest with respect to national norms.

c. Title VII white non-Hispanic student pretest and posttest means showed that the relative standing of these students on English Language Arts declined slightly between pretest and posttest in four of the five grades included in the study (grades 3,4, and 5).

d. Title VII black student pretest and posttest means showed that the relative standing of these students on English Language Arts national norms stayed the same or increased slightly in three of the six grades included in the study (grades 2,3, and 4).

e. Title VII Hispanic students in all grades (2 through 6) performed better than non-Title VII Hispanic students with respect to the acquisition of computational skills in mathmatics.

f. Relative to national norms, the achievement gains in computational mathematics of Title VII Hispanic students who were judged to be Spanish monolingual by their teachers were greater than expected for all grades in the study.

g. White non-Hispanic and black students in Title VII classrooms demonstrated positive gains relative to national norms in computational skills in mathematics.

h. Posttest Spanish Language Arts achievement did exceed that measured by the pretest for Title VII Hispanic students but lack of suitable comparison groups of students did not permit these gains to be uniquely associated with participation in a Title VII project.

i. In regard to gains in English reading, English vocabulary, and mathematics, several Title VII and non-Title VII classrooms were found to be producing unusually effective results when compared to the rest of the sample. Thus, while educational procedures found in some Title VII classrooms resulted in such unusual gains, these gains were also found in some non-Title VII classrooms.

j. Several Title VII classrooms had students who, compared to the rest of the sample, made unusual gains in Spanish reading, vocabulary, and reading comprehension.

k. No clear trend related to the relative proportion of Hispanic and non-Hispanic students in the classrooms with unusually effective or usually ineffective English reading or mathmatics performance was evident. The percent of Hispanic students in classrooms unusually effective in English reading and English vocabulary ranged from 44% to 96%. The percent of Hispanic students in the classrooms unusually ineffective in these academic areas ranged from 30% to 100%. Essentially the same findings were evident with regard to mathmatics performance and Spanish reading performance. (Evaluation of the Impact of ESEA Title VII Spanish/English Bilingual Education Program, Volume 1 Feb. 1977, pp.VIII-3 to VIII-5.)

Any project of such magnitude that attempts to empirically evaluate the effect of a particular educational intervention is clearly in the best interest of the children it serves. However, methodological criticism, secondary analyses of the data, and questions concerning the utility of the statistical analyses of these data have been raised. (Hearing before the Subcommittee on Elementary, Secondary and Vocational Education, 1977; IDRA, 1977; O,Malley, 1977). Moreover, issues about the utility of conducting large scale samplings in evaluation of bilingual education programs have been questioned. The major concerns addressed by IDRA are listed below:

1. Language classifications were done by teachers in spite of the fact that one-half of the teachers did not speak any language other than English and that research indicates teacher judgement to be an unreliable indicator of student language characteristics.

2. Only students who spoke no English whatsoever were classified as "Limited English Speaking."

3. District Title VII personnel were allowed to nominate groups to be used for comparisons from classrooms outside of their own. Difference between school districts, such as organizations, teaching methodologies, teacher training, teacher qualifications and competence, and varying financial resources were not controlled for.

4. About one-third of the non-Title VII teachers and aides were involved in a bilingual program. In view of the AIR data, this suggests that perhaps bilingual program children do better in state or locally funded programs than in Title VII programs.

5. Eighteen out of thirty-seven projects were unable to find a comparison site.

6. Measures of English reading ability were obtained by the use of an English language achievement test given to Spanish monolinguals and were "just learning to read and write in English."

7. AIR used total Reading scores although a large number of these Spanish monolinguals did not take the reading subtests. Consequently, the overall reading scores were lowered for this entire sample.

8. Instructional time, content and teaching methodologies varied considerably and this variation was not controlled for.

9. Only 26% of the teachers reported having a bilingual teaching credential, which is the minimum criteria for adequate teaching determined by many states.

10. IDRA analyses of Title VII bilingual inservice training revealed that, in the five year span prior to the study, 6.6% of the teachers receive no training; and possibly as many as 46% of the teachers received less than 3 days of training in the implementation of this new different instructional methodology.

11. 49.6% of the Title VII bilingual program teachers admitted to not being proficient in the other language.

12. Cost analyses per se were not performed. Instead, subjective responses were collected from "cognizant local personnel," ignoring developmental vs. operational costs, first year vs. continuation program costs, etc. (The AIR evaluation of the impact of Title VII Spanish/English bilingual education programs: An IDRA response, June, 1977, pp. ii, iii, iv.)

Other concerns raised in the Congressional Hearings (1977) and by O'Malley (1979) focus on evidence in the AIR study which suggests that the comparison groups were not equivalent at the outset, and probably less to (due to differential attrition) at the end of the evaluation.

Unfortunately, this evaluation fails to resolve the critical question: Is bilingual education an intervention of benefit to language minority children? The failure of the evaluation to control for qualitative aspects of bilingual and traditional program efforts is a weakness which precludes clear, decisive answers to this question. Instead, the evaluation poses many more questions than it answers: Were projects administered poorly? To what extent were teachers "qualified" to implement and support program initiatives? How was the diversity of curriculum models so prevalent in bilingual education controlled for? How was the adequacy of curricular implementation controlled in such comparison? Why so much variability in academic results across the program studied?

Therefore, although this major evaluation effort has attempted a comprehensive and critical look at bilingual education in general, it in no way provides the answers to the specific questions of critical concern. Most disappointing, it failed to assess the influence of bilingual education in early childhood (ages 2-6), a crucial time for the acquisition of linguistic and cognitive repertories so significant in later educational achievement.

To conclude at this time that bilingual education programs do not differ significantly from "traditional" English language education programming in achieving academic objectives for linguistic minority children would be a gross error. In fact, attempting to answer such a question seems educationally inappropriate. Given the role of language in the education of these children, the crucial question is, "What form of bilingual instruction will significantly influence the education of the bilingual or potentially bilingual student?"

A recent report by the Carnegie Corporation of New York (Pifer, 1980) assessing the relationship of bilingual instructional strategies specific to Hispanic populations of the United States concluded:

> Whatever happens, the fact remains that at least 1.75 million Hispanic children have limited proficiency in English and need some form of special language assistance before they can fully participate in the educational system. Since neither quick submersion in regular classes nor ESL alone has worked well with children from low income, non-English speaking backgrounds, teaching such youngsters in their first language while they are learning English would appear a sensible alternative. (Pifer, 1980, pp. 14-15.)

In a recent review of selected bilingual education program data, Troike (1981) readdresses program evaluation concerns and the results of more recent bilingual education program evaluations. Specifically, he reports positive academic achievement results for bilingual education students compared to similar "regular" program students in several U.S, contexts which varied across language of instruction (Spanish/English, French/English, Chinese/English, and

Navajo/English). A more recent (Sandoval-Martinez, 1982) evaluation of bilingual Headstart curriculum effects has indicated that bilingual instruction was more effective than regular preschool instruction on measures which reflected English language development, concept development and perceptual motor development. Unfortunately, even such positive results are subject to the same criticism of impreciseness which has underscored those evaluations which purport to evidence negative results (AIR, 1977).

Not until ambiguous teacher, administrative and curricular variables are sufficiently defined and subjected to analysis will the answer to this question be possible. What seems clear-cut in the evaluation of over a decade of bilingual education is that bilingual education is here to stay. Its future is not linked to its comparative evaluation to traditional programming. Instead, evaluations of bilingual programs must identify the specific character of the programs which succeed, acknowledging the diversity of language, culture, curriculum, personnel and community support which specifically define any bilingual education effort. Such evaluation enterprises must go beyond a pre-post assessment mentality. They must assess qualitative aspects of programmatic and community features using ethnographic and other socio-cultural observational techniques. In essence, the relationship between the implementation of experimental demonstrations and evaluation efforts in bilingual education must be closely managed and monitored to ensure that independent variables are well defined and functioning within these definitional parameters before the factorially defined dependent variables (Winer, 1971) of process/implementation and impact are constructed and introduced. The intended efforts of bilingual program demonstrations (i.e., replicability) and their evaluation (empirical assessment and generalizability) will not be reached in elementary and other educational programs until this goal is achieved.

SPECIFIC IMPLICATIONS

Teaching/Learning Strategies. It is always difficult to extract from a body of research literature specific implications for an applied teaching technology. The character of controlled research environments, the uncharacteristic control of intervening variables, and the starchiness of independent variable intervention often precludes generalization of findings to "real" classrooms. Yet, within these study environments of controlled experimentation and observation, information potentially of relevance to bilingual classrooms has emerged. McLaughlin's (1978) review of such research led him to conclude that many misconceptions are prevalent with respect to second language and bilingual acquisition in early childhood. Among them:

1. The young child acquires a language more quickly and easily than an adult because the child is biologically programmed to acquire language, whereas the adult is not.

2. The younger the child, the more skilled he is in acquiring a second language.

3. Second language acquisition is a qualitatively different process than first language acquisition.

4. Interference between first and second language is an inevitable and uniquitous part of second language acquisition.

5. There is a single method of second language instruction that is most effective with all children.

6. The experience of bilingualism negatively (or positively) affects the child's intellectual development, language skills, educational attainment, emotional adjusted and/or cognitive functioning. (McLaughlin, 1978, pp. 197-105.)

McLaughlin is not admitting total ignorance in concluding that the above propositions are false. Instead, he is following the strategy of any "good" scientist: propositions which are extracted from empirical observation and experimentation are to be handled with extreme caution and doubt. It is possible that some or all of the above propositions are true, but to claim their truth at a time when supportive evidence is unavailable, is unwarranted and clearly not in the best interest of future research and the applied technology of education.

Is it possible to answer any bilingual education concerns? With the above issue of caution in mind, there are some questions specifically related to bilingual education and bilingual research which deserve discussion.

Will bilingual education efforts in early childhood negatively affect children's linguistic and cognitive development? Given the data discussed previously, it seems clear that exposure to two language systems and subsequent proficiency in these two languages does not retard linguistic or cognitive development. That is, children who were operating at complex levels in Spanish were not "retarded" in English as compared to other "matched" monolingual English peers. Therefore, a bilingual experience in early childhood alone does not necessarily retard linguistic or cognitive development. Unfortunately, important questions still remain:

1. How are differences in the qualitative nature of the bilingual experience related to linguistic and cognitive development?

2. How are cognitive process variables related to bilingual development?

Do bilingual education efforts in early childhood positively affect linguistic and cognitive development? Although there is evidence for the lack of negative effects of bilingual acquistion on general linguistic development, there is no evidence of advanced linguistic development for bilinguals when compared to "matched" monolinguals. That is, there is no report of bilingual subjects' increased proficiency in either language as compared to native monolingual speakers of either language, Cognitively, there is evidence that bilinguals score significantly higher on several cognitive measures than "matched" monolingual peers. These measures tend to be those reflecting the ability to consider properties of the environment in a more "flexible" manner: to construct more general semantic categories than monolingual peers. Critical questions remain, however:

1. Are these advantages related to bilingualism or other (potentially cultural) variables associated with bilingualism?

2. Are these advantages related to proficiency levels of bilingualism?

3. Are these advantages related to the specific languages involved and specific cognitive measures (tasks)?

Should bilingual education efforts be immersion, transition, or maintenance? It seems evident from the foregoing review that many critical issues related to bilingual development and the education of bilingual students remain unresolved. Contradictory research findings have emerged regarding the qualitative nature of bilingual development, although this form of research is not new. Moreover, cognitive correlates of bilingualism have only recently begun to receive systematic attention at the empirical level. Formal evaluations of bilingual instruction models have proven to be a difficult and often disappoining enterprise. Only the Canadian bilingual French/English programs have provided thorough and comprehensive evaluation information. Unfortunately, due to critical ethnolinguistic, socio-economic and socio-political differences regarding the context of the Canadian programs, the results of those evaluations are impossible to relate to ongoing bilingual education programs for minority ethnolinguistic groups of the United States.

Besides reemphasizing the need for more and better basic and applied research in the area of bilingualism and bilingual instruction, what recommendations regarding instructional procedures for the education for bilingual students might be made? First, the previous discussion of research has emphasized the interaction of linguistic, cognitive, and social domains. That is, *bilingual* children must be perceived as developing linguistic, social and cognitive attributes interdependently. Therefore, a bilingual child brings to the schooling environment (1) two linguistic systems, (2) the history of immersion within a complex social milieu utilizing those two systems (3) at a time when cognitive and academic growth is most influenced by social milieu. It seems reasonable to suggest that it is these differential social mileus which have produced the discrepancies in research outcomes discussed previously. And, since the classroom is a systematic extension of these social/interaction patterns, it will either serve to enhance or impede continued linguistic, social and cognitive development.

How might the classroom serve to enhance that development? Linguistic ability is the first key variable, although it alone is not independent importance. Recall that bilinguals possess diverse linguistic functioning repertoires: (1) The child may be more proficient in L_1 and L_2 (the Dominant L_1 Child); (2) The child may be equally proficient in L_1 than L_2 (the Balanced Bilingual Child). Proficient here is meant to take into consideration the broader definition of communicative competence rather than standard "morphological and syntactic" competence. If effective instruction is to take place in the classrooms, communication between student and teacher must be maximized. Most directly, this mandates instruction in the child's dominant language. Where English is not the student's dominant language, academic instruction should not reflect an English emphasis.

Should English be taught at all in this circumstance? In almost all regions of the country, English "pervades" the child's natural social and educational environment. The physical presence and the psychological weight of such a presence "impels" English development. Therefore, although some English as a Second Language (ESL) instruction may be beneficial, it is unlikely for a child immersed in such an English environment not to become proficient in this language. Of course, this acquisition will take time. By moving forward with academic instruction in the child's dominant language, however, on academic/cognitive retardation is likely to result.

The balanced bilingual presents a different educational challenge. This student is exceptional and should be considered gifted. Therefore, instruction for this child should reflect this exceptionality. Instruction should emphasize both language wherever possible. Ten years ago, bilingual instruction or balanced bilinguals would have been almost impossible. With the development of bilingual materials and the training of bilingual personnel within the last decade, it is not only possible and educationally desirable to maintain and further extend the child's bilingual competency.

For the unbalanced, English dominant student, instruction should reflect this English proficiency. This is not to suggest that bilingual instruction for these students should be unavailable. These children bring with them their ethnolinguistic status to the English curriculum. It is important psychologically not to negate this ethnolinguistic consciousness. Bilingual instruction should emphasize the inseparable nature of culture and language, with some systematic L_2-as-a-second-language instruction. The goal of this form of instruction model would not be to produce proficient bilinguals, but instead, to explore culturally and linguistically the ethnolinguistic heritage of the student in order to maximize the educational influence of the classroom.

Recall that the above commentary regarding classroom policy is based on scarcity of sound empirical research. But, it is consistent with the present knowledge base regarding multilingual acquisition. The commentary is made in regard to early schooling years, at time of critical importance for establishing effective instructional programming. This is expecially true for children from ethnolinguistic minority groups where educational history has been riddled with neglect and failure. Bilingual instruction in its various forms holds for these children a promise for educational parity.

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AN ENGLISH-ONLY PRESCHOOL PROGRAM

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ENGLISH LANGUAGE ACQUISITION PILOT PROGRAM

The Legislature finds that there are 500,000 pupils of limited English proficiency in California schools properly served during the regular school year by bilingual education programs which provide English language development while maintaining a pupil's normal grade level progress through subject matter instruction in the pupil's home language until he or she attains English fluency and can be transitioned into an English-only classroom.

The Legislature further finds that such a pupil's transition to an English-only classroom can probably be expedited by high intensity English language training as a supplement to bilingual education, and in conjunction with it, when offered through appropriately structured pre-kindergarten and summer school programs offered for the purpose of English language development only and not also as vehicles for subject matter instruction.

Accordingly, the Legislature hereby establishes the English Language Acquisition Pilot Program to assess the efficacy of high intensity English language training as a supplement to bilingual education in facilitating the attainment of English fluency by limited-English proficient pupils and thereby expediting their transition from bilingual classrooms to English-only classrooms.

SECTION 1. Section 52179 is added to the Education Code to read:

> Section 52179. (a) There is hereby established the English Language Acquisition Pilot Program to be administered by the Department of Education pursuant to Section 52177(a)(3) and operative from September 1, 1986 through September three years from the effective date of this act. The department shall select individual schools to participate in this pilot program in accordance with the following requirements:
>
> (1) Schools shall have no unresolved bilingual education compliance issues on record;
>
> (2) Classes conducted pursuant to this section shall consist of high intensity English language training as defined by the department; the vocabulary used in such classes shall be equivalent to that to be encountered by pupils in their next grade levels;
>
> (3) Classes, except for pre-kindergarten, shall be conducted during summer sessions only;
>
> (4) Classes shall be staffed by language development specialists;

(5) In the case of pre-kindergarten classes, all pupils shall be of the same home language group, there shall be no more than ten pupils in a class, pupils shall be at least four years of age and eligible to enter kindergarten at the next semester, and an appropriate bilingual-crosscultural aide shall assist the teacher on a full-time basis;

(6) All entering students shall be limited-English proficient;

(7) To guage English language development, all students shall be assessed at the beginnings and ends of their pilot program sessions utilizing instruments authorized pursuant to Section 52164.1(c);

(8) Pupil participation shall be voluntary at the discretion of the pupil's parent or guardian.

(b) All participating schools shall provide data on program efficacy as required by the department. No later than six months from the effective termination of this pilot program, the department shall provide a report on program efficacy with appropriate recommendations to the Speaker of the Assembly, the President Pro-Tempore of the Senate, and to the chairpersons of the education policy committees of both houses.

(c) The department shall fund at least 100 pilot program sessions in at least _____ schools geographically dispersed throughout the state. For the purpose of funding the pilot program and reporting to the Legislature, the sum of _____ is hereby appropriated to the department from the General Fund.

A BRIEF CASE FOR BILINGUAL PRESCHOOLS

BY

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June, 1985

Introduction

The relatively small number of effective preschool programs for students from non-English language backgrounds can be interpreted as an indication that many of today's early childhood educators continue to embrace the same misconceptions about the relationship between bilingualism and scholastic performance as their predecessors. This paper, drawing on the results of research and evaluation studies, contains a brief description of how bilingual instruction supports improved academic, language, and psychosocial outcomes. An attempt has been made to not only resolve apparent contradictions in the research information but to also provide preschool educators with a general understanding of the major issues associated with formulating policies and practices regarding early childhood programs for language minority students.

Nationally, it has been estimated that at least 3.4 million schoolchildren are limited in the English language skills needed to succeed in school programs designed for native speakers of English (Waggoner, 1984). In California alone, the language minority student population is approximately 963,000 out of 4 million (California State Department of Education, 1984). More than ever, the adequacy of preschool programs to meet the educational needs of language minority students is an important public issue.

To my way of thinking, too many educators have depended solely on their common sense when making important decisions about educational programs and practices for language minority pupils. While common sense is important, it should be bolstered by information gathered through the conduct of well-controlled research and evaluation studies. Utilizing data from scientific studies to guide educational policy helps guard against simple-minded, fly-by-the-seat-of-the-pants decisions that have plagued many school reform efforts. Fortunately, there is now a growing body of empirical research in the areas of bilingualism, bilingual education, and second language acquisition from which the raw material to provide direction to educators may be extracted (California State Department of Education, 1982a).

In a survey of elementary school teachers in California (California State Department of Education, 1982b), more than 55% felt that speaking a language other than English at home was harmful to students. This is probably reflective of teacher attitudes for the last several generations. Bilingualism was and continues to be viewed as a handicap (Sanchez, 1966). It is not surprising that teachers hold such views. They have the first hand experience of watching language minority students struggle through school. It is estimated that between 23 and 28% of all U.S. Spanish-speaking students do not graduate from high school (Rumberger, 1981). Students from non-English language backgrounds are twice as likely as Anglo-Americans not to have completed high school (Aguirre & Cepeda, 1981).

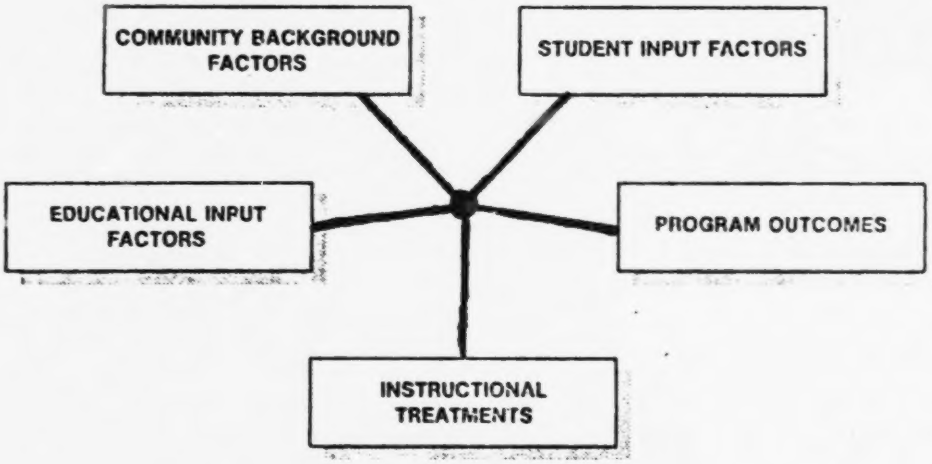
Bilingualism & School Achievement

What many educators fail to realize is that (1) a variety of factors, not only bilingualism, influence the school performance of language minority students and (2) there are various forms of bilingualism which differentially affect individual pupils.

Cummins (1979) has advanced the idea of an interaction model. He suggests that there are a number of important variables which affect schooling outcomes. Variables such as the student's first language, age at arrival in the U.S., socioeconomic status, interaction with each other and with other variables such as educational resources (both human and material). The point is that educators should be aware that multiple factors influence student outcomes and that factors interact with one another which result in interaction effects which inturn influence outcomes. Cummins model is graphically dipicted in figure 1 below.

Figure 1

THE INTERACTION MODEL FOR LANGUAGE MINORITY SCHOOLING


COMMUNITY BACKGROUND FACTORS
STUDENT INPUT FACTORS
EDUCATIONAL INPUT FACTORS
PROGRAM OUTCOMES
INSTRUCTIONAL TREATMENTS

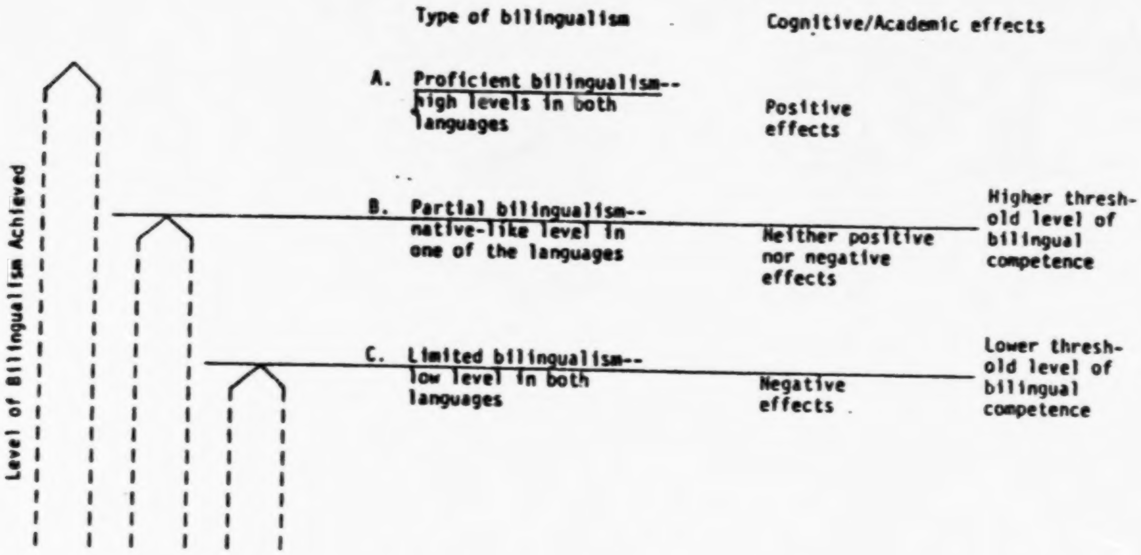
Adapted from J. Cummins, "Linguistic Interdependence and the Educational Development of Bilingual Children," Review of Educational Research, V.49, Spring, 1979

Findings that bilinguals differ in many ways but especially in the manner in which they adjust to their sociolinguistic environment have led investigators to speculate on the nature and consequences of different types of bilingualism. Lambert (1981) makes a convincing argument that bilingualism has additive and subtractive forms. In the first instance, individuals acquire a second language while developing and maintaining their mother tongue. Both languages have social value and respect for thier speakers. In contrast, as mentioned earlier, ethnolinguistic minorities in the U.S. often, because of national educational policies and social pressures of various sorts, cease to develop and eventually lose their first language in deference to the more prestigious national language. Numerous studies indicate that additive bilinguals enjoy cognitive, linguistic, and psycosocial advantages over monolinguals. Conversely, when compared to their monolingual counterparts, subtractive bilinguals are consistently found to be at a disadvantage.

Similar to the notion of additive and subtractive forms of bilingualism is the threshold hypothesis formulated by Cummins (1979). In an attempt to resolve the apparent inconsistencies in the results of studies on bilingualism, Cummins promotes the threshold hypothesis as a framework with which to predict the schooling effects of different forms of bilingualism. Cummins (1981a) suggests that proficient bilinguals will usually experince positive outcomes as a result of developing high levels of skills in two languages. On the other hand, limited bilinguals have less than native-like ability in either of their two languages. These individuals commonly experience negative school outcomes. A third group, labeled as partial bilinguals, develop native-like ability in one language but not the other. If the language of native-like ability is the mother tongue and also the national language Cummins (1979) reports no negative outcomes. This has been the case, for instance, of English-speaking high school students in the U.S. studying German, French, or Spanish. If however, the language of native-like ability has replaced the mother tongue, individuals may suffer some psychological disadvantages which in turn influence cognition (Lambert, 1982). Thus, in the case of language minority students, partial bilingualism is usually the result of a subtractive process. On the other hand, majority students invariably experience partial bilingualism as an additive process. The threshold hypothesis suggested by Cummins is visually displayed in figure 2.

Figure 2

Cognitive/Academic Effects of Different Types of Bilingualism


Type of bilingualism
Cognitive/Academic effects
A. Proficient bilingualism--high levels in both languages
Positive effects
B. Partial bilingualism--native-like level in one of the languages
Neither positive nor negative effects
Higher threshold level of bilingual competence
C. Limited bilingualism--low level in both languages
Negative effects
Lower threshold level of bilingual competence
Level of Bilingualism Achieved

Adapted from P. Toukomaa and T. Skutnabb-Kangas, The Intensive Teaching of the Mother Tongue to Migrant Children of Pre-School Age and Children in the Lower Level of Comprehensive School. Helsinki, Finland: Finnish National Commission for UNESCO, 1977.

Arguments Against Bilingualism

Collectively, Lambert through the constructs of additive and subtractive bilingualism and Cummins through the notion of a threshold hypothesis, advance a framework by which the academic, linguistic, and psychosocial attainments of varying types of bilinguals may be understood. Still, a number of arguments against bilingualism and bilingual education continue to be advanced.

A common argument against bilingual schooling is that language minority students should be exposed to as much English as possible. The obvious theory is that a child will learn English if he or she is required to speak English and nothing but English (National Education Association, 1972). The maximum exposure to English theory just does not account for much of the data on schooling language minority students. It neglects the fact that large numbers of such students have failed in the English-only regular school program. In addition, many immigrant students enter U.S. schools in the late elementary or even secondary grades and do quite well linguistically and academically. If maximum exposure to English were essential, these students would be hopelessly behind native speakers of English. Finally, evaluations of some successful bilingual and foreign language immersion programs have shown that students may be schooled up to 50% of the time or more in a language other than English and still attain native-like ability in English. The issue seems to be more one of sufficient exposure to the second language and not one of maximum exposure. Once students receive sufficient instruction in a language, additional exposure will have little effect. In the case of bilingual schooling, superfulous instructional time in English would be better devoted to sustaining academic achievement in the language other than English.

Another argument against bilingual schooling is that instruction in two languages reduces the amount of academic material that can be covered since more instructional time is needed. The fact is, that if implemented properly, academic progress in such subjects as math, science, and social studies will occur at a normal rate in bilingual classes. A convincing explanation of how this happens has been suggested through the notion of a Common Underlying Proficiency (Cummins, 1979; 1981). This model of bilingual proficiency posits the idea that many literacy-related aspects of language proficiency are common across different languages. That is, cognitive/academic skills, competencies, and knowledge learned in one language can be expressed, manifested, and brought to bear on similar tasks in another once basic communicative skills are acquired in both languages. The notion of a Common Underlying Proficiency explains how some Vietnamese refugee students graduate from high school as valedictorians after only two or three years of schooling in the U.S.. Apparently these students are able to manifest the knowledge learned through their first language in English as soon as they have acquired conversational skills in English.

On a more practical note, many teachers and administrators object to bilingual education on the grounds that the human and material resouces are not currently available to implement such programs. In California alone, more than half of the elementary school level bilingual classes are staffed by regular instead of bilingual teachers.

Faced with a shortage of qualified staff or adequate materials, educators often abandon the assumption that the students' mother tongue can be utilized in an educationally supportive manner. While full bilingual programs appear to have better results than other bilingual models, it is not necessarily an either or question. Even when it is impossible to implement a full bilingual program, several approaches which use the primary language are still available.

For instance, in the French immersion programs in Canada, a team teaching approach is used in which some teachers are strictly English models and others French models. This strategy has also been used in a smaller number of U.S. bilingual schools. The advantage is that minority language teachers can cover almost twice as many students. Incidently, under this format, quality of instruction is often improved since non-native speakers of the minority are not required to teach in that language during their training period.

When bilingual teachers are not even available for teaming, magnet classrooms and learning center approaches have been used. Many schools have employed bilingual teacher aides who assist regular teachers. School officials often neglect community language schools and parents, who through structured programs, can contribute significantly to the children's academic growth. What should be avoided are policies and practices which assume that, because of a shortage of bilingual teachers or even aides, the students' mother tongue is no longer a vehicle for academic achievement and positive socialization.

Effective Program Features

In the last several years, a number of comprehensive reviews have been done on research and evaluation studies concerning bilingual schooling (Baker & de Kanter, 1983; Cummins, 1979; Diaz, 1983; Swain & Lapkin 1981). An analysis of these investigations points to certain sociolinguistic and instructional factors, both formal and informal, which tend to be strongly associated with positive program outcomes. The strength of these indicators is based upon the frequency and consistency with which they are manifested in programs which have been successful in promoting high levels of language development, academic achievement, and prosocial behavior.

Duration of Treatment. Many students are able to acquire basic conversation skills in a second language in a period of two to three years. Yet, most students take from five to seven years to acquire cognitive/academic language skills which are normal for their age and/or grade level. Successful programs are most often designed to accommodate students during the entire time required to reach the higher level academic language skills.

Exposure to L2. Students are exposed to ample amounts of comprehensible second language input in acquisition-rich environments (Krashen, 1981). This is accomplished by providing participants with not only language classes but subject matter classes such as science and social studies in which the second language is used as a medium of instruction in a sheltered format. The idea is to use methods and techniques which approximate the experiences students have in acquiring their first language.

Use of L1. The students' native language is taught as a subject and is used for subject matter instruction. This is done to promote L1 development, foster academic achievement, and also to provide students with background knowledge to make second language input more comprehensible (Krashen, 1981). Language minority students often enter U.S. schools at an academic level lower than their English-speaking peers. In the process of learning English, they fall even further behind. By the time such students acquire even basic conversational skills (2-3 years) they are at a point where they will probably never catch up to native speakers of English. Use of the students' native language to sustain academic achievement is an important feature of successful programs.

Nature of Instruction. In bilingual situations, monolingual lesson delivery (i.e, different periods of time devoted to instruction in and through each of the two languages of the program) seems to be superior to designs which rely on language mixing during a single lesson or time frame. This is not to say that language mixing itself is harmful; rather it appears that sustained periods of monolingual instruction in each language are required to promote adequate academic as well as language development.

In addition, in successful programs students commonly receive their instruction from certificated teachers. Over the course of the program students are exposed to a number of teachers who have native or native-like ability in the second language and a number who have native or native-like ability in the mother tongue. Such teachers are able to initiate and sustain quality student/teacher communications such as the negotiation of meaning.

In summary, the significant features associated with positive program outcomes identified in this paper are in alignment with the theoretical constructs suggested by Lambert (1981) and Cummins (1981). The features which support sufficient exposure to both the first and second language, a focus on academic achievement, and quality student/teacher interactions are the same features which contribute to the development of individuals who are proficient, additive bilinguals. Should any of these elements be neglected, the effectiveness of the instructional treatment will probably diminish.

Exemplary Preschool Program

Since 1979, the Carpinteria Unified School District in Santa Barbara County, California has implemented a Spanish-only preschool program for the children of low socioeconomic status farm workers. Stimulus for an academic program in Spanish came after it was noticed that the Spanish-background children consistently scored much lower than English-speaking children on kindergarten readiness tests even though the former group was tested in Spanish.

The main goal of the Carpinteria program was to foster academic growth among the Spanish-speaking youngsters in an effort to close the achievement gap between minority and majority students. The project also included activities in which the parents were required to assist their children.

Over a four-year period, the Spanish-only preschool program has produced very positive results. Participants have averaged a score of 21.6 on the kindergarten readiness test in comparison to English-speaking peers who scored at 23.2. Spanish-speaking pupils in a preschool program with a strong emphasis on the development of English skills averaged 14.6. Of special note is the fact that the Spanish-only preschoolers also outperformed the Spanish-speaking students in the regular program on measures of oral English proficiency. It seems that the highly-charged academic and language environment in the experimental preschool assisted the children in acquiring more of the English to which they were exposed to in the school, neigborhood, and at home (Tempes, 1984).

Conclusion

It seems to me that we need many more programs like the Carpinteria preschool model. First of all, bilingual programs do provide an environment where language minority students acquire English. Bilingual educators use innovative as well as time-tested methods in exposing students to the English language. Secondly, instruction in and through the minority language assists students in developing the academic foundation which will serve as the basis for future success in higher education and vocational pursuits. Thirdly, bilingual programs seem to be conducive to positive psychosocial adjustment. Students develop constructive viewpoints not only about their own ethnic group but also about mainstream society. Finally, a side benefit of bilingual instruction is bilingualism, the knowledge of English and one other language. This does not lead to pockets of monolinguals who refuse to use English but rather to well-adjusted individuals who can use English as well as another tongue, an important national resource. Interestingly enough, bilingualism in itself seems to have a positive effect on scholastic achievement. Language minority and English-speaking students who learn a second language well seem to do better academically, are better at creative thinking tasks, and often. even gain in IQ points.

Thus, when properly implemented, bilingual education can result in productive citizens with all of the language, academic, and psychosocial attributes necessary to contribute to a progressive America. English will be their common language but thankfully not their only language. The students will believe in and support the notions of unity, democracy, and prosperity, for after all, they will owe their well-being to these ideals. In addition they will value the notion of cooperativeness, the cooperativeness that was demonstrated by mainstream America to assist them in achieving their educational goals. Bilingual education is a step in the right direction. We should work to improve it but, unfortunately, often we don't.

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Workshops and Seminars

On Saturday, April 21, participants attended workshops and seminars presented by researchers and by people experienced in staff development.

Three presenters submitted *papers* for this report: Barry Mclaughlin, Rafael Diaz, and James Campos.

In addition to these papers, the Advisory Committee office has *video tapes* of the following workshops and seminars:

Barry McLaughlin:	The Effects of Early Childhood Bilingualism
Rafael Diaz:	The Impact of Bilingual Education on Children's Cognitive Development
Sabrina Peck:	Child-Child Tutoring Sessions: Part of the Process of Becoming Bilingual
David Dolson:	Minority Language Use and Scholastic Performance
Eduardo Hernandez-Chavez:	The Bed of Procrustes: Language Development for Minority Children
Gilberto Lopez:	Language Rights for Infants
Lily Wong-Fillmore:	Early Second Language Learning: What Research and Common Sense Tell Us
Concepcion Valadez:	Enhancing Children's Early Years: The Possibilities of Bilingualism

These video tapes can be borrowed from the Advisory Committee office.

Also, the Committee office has *outlines* available of the following presentations:

Sabrina Peck, on child-child tutoring
Grace Holt and LaVina Ward, on Project First Chance
Susana Maiztegui, on Spanish language development for personnel

Second-Language Learning in Early Childhood:

Some Thoughts for Practitioners

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Second-Language Learning in Early Childhood:

Some Thoughts for Practitioners

It is clear that children who come to the American school system from families where English is not the primary language are in jeopardy in our schools. Eight percent of all monolingual English-speaking children in grades 5 to 8 were classified as at least 2 years behind their expected grade level, but 29 percent of all children from non-English-language backgrounds fell into this category (National Center for Educational Statistics, 1978). In a recent study high-school dropouts among minority-language children, Steinberg, Lin Blinde, and Chan (1984) noted that individuals from homes where English is not spoken are almost twice as likely to drop out before graduating from high school than are individuals from homes where English is the primary language. If, in addition, the child does not use English as the primary language of social interaction, the likelihood of dropping out of school prematurely increases to four times that of English monolingual speakers (40 percent vs. 10 percent).

It is not easy for a child to learn a second language and function well in that language in school. The literature on second-language learning in childhood indicates that--contrary to conventional wisdom--second-language learning is not automatic for children (McLaughlin, 1984, 1985). For a child to acquire a second language requires a great deal of trial-and-error, creative hypothesis-testing, and awkward experimentation. Many children do not succeed. Especially in the classroom context, second-language learning is a difficult and frustrating enterprise for many children.

In this paper I would like to examine some conclusions that can be drawn from the literature on second-language learning in childhood. I will look at three topics: early childhood bilingualism, the role of input on language learning, and ethnographic factors. My focus will be on second-language learning in early childhood because of the increasing number of children from non-English backgrounds in day-care and early education programs. Practitioners in these programs have an excellent opportunity to promote second language learning, while fostering the development of the child's first language. If they succeed in this enterprise, children from non-English-speaking families will have a much better chance of succeeding in our school system than is now the case.

Early Childhood Bilingualism

The research literature on early bilingualism consists mainly of case studies (for a fuller discussion, see McLaughlin, 1984). This literature clearly indicates that children can, without apparent effort, learn two languages simultaneously. There is little support from this literature for the notion that learning two languages at the same time causes cognitive strain or that learning two languages interferes with learning either one of them adequately. In many countries of the world, bilingualism is the norm, not the exception.

One of the findings that seems to hold up in this literature is that most successful results are obtained when the conditions of language presentation are made clear to the child. This happens, for example, when there is a clear distinction between speakers: the child's father speaks one language and the mother another. This "one-person-one-language" rule seems to enable the child to keep the two languages separate. If parents and other speakers mix their languages, using now one and now the other, more confusion appears to occur and the child has more difficulty keeping the languages separate.

It should be noted, however, that there are language groups in which two languages are used somewhat interchangeably by all speakers. In this case there is a base language--for instance, Spanish--with words or phrases interspersed from a second language--for instance, English-for rhetorical or stylistic purposes. This "code switching" does not appear to lead to interference between language, as research with children from such communities shows little confusion between languages. Greater confusion is likely to occur when speakers change languages unpredictably from sentence to sentence, or from day to day.

The literature suggests, then, that young children will learn second languages best in an environment where the languages are clearly separated by persons. Child-care practitioners who are themselves bilingual will promote language learning best if they avoid the tendency to speak to the child in a second language when he or she fails to understand in the first. Studies of young children indicate that it is better to use consistently one language and to try to promote understanding in that language by paraphrasing and using context than to switch over to a second language.

Another finding that is supported by studies of early childhood bilingualism is that children go through the same developmental stages in acquiring their two languages as do monolingual speakers of each of those languages. That is, a child who is bilingual in Chinese and English goes through the same developmental stages in learning Chinese (or English) as does a Chinese (or English) monolingual child.

This finding suggests that it is not pedagogically sound to try to teach grammatical constructions to young children. They will learn them in their own time. Instruction in grammar forces children to learn constructions for which they are not developmentally ready. Research indicates that such instruction confuses children and interferes with the natural developmental progression (Felix, 198]; Lightbown, 1983). Thus attempts by educators to speed up the learning process by teaching rules to young children are likely to be counterproductive. Young children learn languages by using them in natural communicative contexts. This brings us to the next topic.

The Role of Input in Language Learning

What can caregivers do to facilitate language learning? For years, since the 1960s, the prevailing doctrine among linguists and psycholinguists studying first-language acquisition was that caregivers do very little. Noam Chomsky, America's leading linguist, was insistent in claiming that the language to which young children are exposed is too "meager and degenerate" to account for the rapid progress that children make in acquiring their first language. According to Chomsky, there were too many false starts, hesitations, slips of the tongue, unfinished and ungrammatical utterances in the input to which children are exposed. In this view, children do not learn by hearing people speak; they learn because they are innately preprogrammed to learn language.

Since the late 1970s, however, researchers have been discovering that the speech to which young children is exposed is not "meager and degenerate." Most speech addressed to young children is well-formed by any criterion. Indeed, it is in some ways ideally suited for the child language learner. It is slower than normal speech, it is directed at the here-and-now. Speech to young children is simpler, shorter, and contains a more restricted vocabulary than does speech addressed to older children or adults. Caregivers seem to intuitively modify their speech to young children in such a way as to make it more easily understood.

Indeed, it does not seem necessary to train caregivers to talk in an appropriate way to young language learners. They do so spontaneously when they are attempting to communicate something to the child. Caregivers intuitively modify their speech, use nonlinguistic cues and gestures, and repeat and expand their speech when dealing with young children. Otherwise, if they speak as they would to another adult, the child tunes out and communication is disrupted.

Caregivers in the family or in day care or early education centers will promote language development in young children if they provide a stimulating and diverse linguistic environment. Gordon Wells (198]), in a large study of interaction patterns in the family that relate strongly to language development, found that one particular process was especially important. He called this "negotiating meaning." It refers to the collaboration needed in conversation to express needs, ideas, and intentions. If caregivers are concerned with negotiating meaning--their own and the child--they will do many things automatically to ensure that meaning is communicated. If, on the other hand, the child's utterances are left to fall without response, if there is little concern with communication, then language development will be slowed down.

Research indicates that language development is promoted when children are in a rich linguistic environment and have opportunities to use the language in meaningful social interactions (Wong Fillmore, 1982). Caregivers can use pictures, demonstrations, gestures, enactment, or whatever works to communicate information and to link language to context. But they need to recognize that language learning cannot occur if the children never use the language in meaningful ways. There have been numerous suggestions as to how this can be done, many of which involve cooperative learning where non-native speakers work together with native speakers to solve problems.

One advantage of using native-speaking peers is that this greatly increases the sources of language input that non-native speakers receive. Teachers and aides can only give so much time to each child. But if children are to have plenty of opportunity to use their second language in meaningful ways, they need to be able to interact with as many native speakers as possible and receive as much feedback as they can in their communicative attempts. This consideration argues strongly for classes taht contain a balance of native and non-native speakers. In fact, the opportunity to interact with native-speaking peers may be especially important for some children.

Ethnographic Considerations

In recent years a number of researchers have adopted what has become known as an "ethnographic" approach to classroom analysis (for a fuller discussion, see McLaughlin, 1985). The concept comes from anthropology and refers to a careful examination of the interactional activities of teachers and students. The ethnographer attempts to make explicit relationships and behavior patterns that members of a social group leave implicit. In the school context, this means examining the values and goals of the school and of individual teachers, and looking at what is taught and learned formally and informally.

A classic ethnographic study focusing on cultural issues in education is Susan Philip's (1972) work on the "acquisition of rules for appropriate speech usage" among school children at the Warm Springs Indian reservation in Central Oregon. By comparing interaction patterns in Indian and non-Indian classrooms and in the Indian community, Phillips was able to explain the Indian children's silence and non-participation in traditional classroom lessons. Philips observed that Indian children showed relatively less willingness to perform or participate when they had to speak alone in front of other students. On the other hand, the Indian children were more willing than non-Indian students to participate in group activities that did not create a distinction between individual performer and audience.

One of the goals of ethnographic research has been to identify ways in which classroom activities can be structured in a way that activates children's energies and competencies, yet does not conflict with school goals. An interesting example is the Kamehameha Early Education Program (Au & Jordan, 1981) with native Hawaiian children. Children from this background performed consistently poorly in the American school system, especially in reading. Ethnographic research revealed that in the culture from which these children came, narrative speech events were marked by "overlapping speech" and a "talk story" style in which narration was jointly produced. When teachers incorporated this speech style into their classroom routines, children began to make significant progress in reading and test scores improved markedly.

The method used in the reading program stressed comprehension rather than a phonics approach and utilized the talk story style. For example, in a lesson about a frog, the teacher began by asking the children to tell all that they knew about frogs from personal experience. Overlapping speech was allowed, and everyone who wanted to do so could contribute. After an interval, the teacher introduced some reading material about a frog. The students read this material silently to themselves. After the story was read silently, another round of discussion took place, with the teacher guiding the discussion so as to ensure comprehension. This method contrasts sharply with the usual approach to reading in which each student reads aloud and mistakes are publicly corrected.

There is considerable evidence from ethnographic research that children from minority cultures learn better when classroom interactional patterns match patterns they are accustomed to. All teachers--including those from the same cultural background--need to be conscious of the need to make accommodations to the child's expectations and normal patterns of interaction.

In some recent research at the University of California, Berkeley, a group of us (Wong Fillmor, Ammon, Ammon & McLaughlin, 1985) have found further evidence of the need to take the child's cultural background into consideration. This research was concerned with second-language learning among Spanish- and Chinese-speaking children in 17 bilingual classrooms. We used assessment measures expecially designed to measure the acquisition of the kinds of language skills needed for successful participation in classroom activities. Our goal was to determine what aspects of classroom structure and teaching behavior had the biggest impact on language learning over the course of a year.

As we analyzed the data, it became apparent that there was no simple answer to the question we had posed. There did not seem to be a straightforward relationship between classroom or teaching variables and language learning. In fact, it was only when we looked at differences between children who were poor in their second language to begin with and those who were more advanced, that we began to find relationships. Specifically, the weaker children showed large gains in oral language production scores when they were in classes where they had numerous opportunities to interact with native English-speaking peers.

Further analyses revealed, however, that this was true to a much greater extent for Hispanic that for Chinese children. In fact, Chinese children who were poor in their initial language abilities in English and who were in classes where there was a great deal of opportunity to interact with native speakers did not show the kind of improvement we found in our Hispanic children. In contrast, Chinese children did well in classes where the noise level was low and where teachers kept the students on task. Chinese children tolerated distraction less, did better when they were in classes in which they received a great deal of independent help, and generally performed better the greater the time taken in class for teacher-directed instruction rather than group seatwork. The Chinese children seemed much more directly dependent on their interaction with the teacher than was the case for our Hispanic children.

Thus it seems that different kinds of approaches work best with differnt kinds of children. Spanish-speaking children seem to profit from the chance to interact with peers who are good language models. Chinese children profit from close interactions with the teacher (and aides). This suggests that one method to use in classes with many Hispanic children is to provide plentiful opportunities for interaction with native English-speaking peers. In contrast, rich and frequent teacher-child interactions seem to help Chinese-speaking children.

It should be noted that adaptation to the child's cultural background involves more occasional history lessons or celebrations that are intended to give children from ethnic minority backgrounds a sense of cultural pride. What I would argue for is a much more radical adaptation, where substantial adjustments are made to accommodate to the child's patterns of language use and interactional style. This implies, however, that mainstream values, patterns of language use, and interactional styles are gradually introduced in the classroom, so that the child has the opportunity to move on educationally and function in the larger society. The point is not that one set of values or behaviors replace the other, but that children have access to both sets so that they can form from both their unique bicultural identity.

Bicultural Identity

In conclusion, I believe that there is much that can be done in early education programs to foster second-language learning in young children. There is a danger, however, that in learning English, the dominant language of the school and the dominant language of the larger culture, children will lose their first language. If this were to happen on a large scale, it would mean the loss of a valuable national resource, bilingual citizens. On a personal level, however, there would be an even greater loss. Children would lose their ability to communicate with their grandparents and in some cases parents, friends, and relatives.

Nowhere in recent literature has this situation been described more eloquently than in a book that argues, paradoxically, against bilingual education. In his autobiographical book, Hunger of Memory, Richard Rodriguez (1982) described how learning English separated him and his siblings from his parents. The school authorities had insisted that his parents speak English--a language they could use but poorly--with their children. Rodriguez wrote:

> ...as we children learned more and more English, we shared fewer and fewer words with our parents. Sentences needed to be spoken slowly when a child addressed his mother or father. (Often a parent wouldn't understand.) The young voice, frustrated, would end up saying "Never mind"--the subject was closed. Dinners would be noisy with the clinking of knives and forks against dishes. My mother would smile softly between her remarks; my father at the other end of the table would chew and chew his food, when he stared over the heads of his children (p23)

Rodriguez ceased to speak, and even to understand Spanish, and so was cut off from his parents, his relatives, and his heritage.

He confessed that he continues to be "paralyzed by the thought of his parents' pained faces," but he argued that this was the price to be paid for assimilating into the public society. One wonders if it is not too steep a price--and one that need not be paid at all. A truly bilingual education is one that produces individuals who can talk fluently and comfortably in two languages.

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The Intellectual Power of Bilingualism

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The Intellectual Power of Bilingualism

It is often heard (at some rather smart cocktail parties) that while the definition of bilingual is "a person who speaks two different languages", monolingual could be adequately defined as "an American." This half-joke, however, is only half-true. At the end of 1979, close to four million children in the U.S. were considered bilingual or in the process of learning a second language (Pifer, 1980); the numbers are rapidly growing. The joke is definitely not true in the Southwest, where history could be written in at least four different languages as the encounters of Hispanic, Anglo and Native-American cultures.

The fact of multilingualism in the Southwest cannot be denied; the fact, nonetheless, remains controversial. No one seems to question the value and benefits of knowing two different languages in adulthood. On the other hand, childhood bilingualism is often criticized as a source of linguistic confusion that might result in serious intellectual deficits. Almost everyone agrees that young children are gifted language learners. The issue remains, however, as to whether educating our children bilingually enhances or detracts from their academic performance and intellectual development.

Based on several decades of linguistic, educational and psychological observations, the present paper argues that growing up with two languages is, indeed, an asset to children's intellectual development. The paper will report linguistic and cognitive advantages observed in bilingual children and discuss the processes through which bilingualism might have a positive effect on children's intelligence. The paper will conclude with a plea to support bilingual educational efforts in the Southwest. But first, the controversy.

Childhood Bilingualism: Asset or Handicap?

Both praise and attacks against childhood bilingualism are often biased by cultural, political and socioeconomic ideologies. Not surprisingly, those who value cultural pluralism will most likely notice the increased awareness and flexibility involved in the ability to function in more than one language. By the same token, those who perceive diversity as a direct threat to their identity and power will most frequently note the possible confusion and linguistic interference that a bilingual child might suffer. Nevertheless, beyond ideologies, prejudice and fear, we must recognize that our knowledge regarding the effects of a bilingual upbringing and education has been clouded mostly by a long history of contradictory findings in the empirical literature. Consider the following statements:

> There can be no doubt that the child reared in a bilingual environment is handicapped in his language growth. One can debate the issue as to

> whether speech facility in two languages is worth the consequent retardation in the common language of the realm. (Thompson, 1952, p.367)
>
> The picture that emerges of the French-English bilingual in Montreal is that of youngster whose wider experiences in two cultures have given him the advantages which a monolingual does not enjoy. Intellectually his experience with two language systems seems to have left him with a mental flexibility, a superiority in concept formation, and a more diversified set of mental abilities...In contrast, the monolingual appears to have a more unitary structure of intelligence which he must use for all types of intellectual tasks. (Peal & Lambert, 1962, p. 20)

On one hand, linguists' case studies of bilingual children have praised the advantages of acquiring simultaneously two, or even three, languages in infancy. The eminent linguist Werner Leopold (1949b), commenting on the bilingual upbringing of his two daughters, noted that by the age of three both girls had an awareness of dealing with two different languages and that, from then on, both languages developed appropriately as two independent systems. Observing no signs of linguistic interference or retardation, Leopold regarded his daughters' bilingualism as a genuine asset to their mental development. Moreover, Leopold argued that since bilingual children had two different words for each referent, they learned early on to separate the sound of the word from its meaning and this, in turn, forced children to focus on essentials, on "content instead of form" (p. 188). Leopold's conclusion echoed the work of the Russian psychologist L.S. Vygotsky (1932/1962), who claimed that bilingualism accelerates the development of abstract thinking by freeing the child's thinking from the concreteness and "tyranny" of words.

On the other hand, in direct contradiction to linguists' case studies, psychological and educational studies done during the first half of this century often reported overwhelming evidence for a so-called "language handicap" in bilingual children (see Darcy 1953, 1963 for reviews). When compared to monolinguals, bilingual children appeared inferior on a wide range of linguistic abilities. Among other things, bilinguals were shown to have a poorer vocabulary (Barke & Perry-Williams, 1938; Grabo, 1931; Saer, 1923), deficient articulation (Carrow, 1957), lower standard on written composition and more grammatical errors (Harris, 1948; Saer, 1923). For a long time children's bilingualism was considered as some kind of social plague (Epstein, 1905), "a hardship devoid of apparent advantage" (Yoshioka, 1929, p. 476). The language handicap of bilinguals was interpreted as a linguistic confusion that affected children's intellectual development and academic performance up to the college years (Saer, 1923). Beliefs about the negative effects of early bilingualism were further confirmed when several studies showed that bilinguals also performed lower than monolinguals on tests of nonverbal abilities, such as tests of dextrality (Saer, 1923) and mathematical competence (Carrow, 1957; Manual, 1935).

How could we interpret such contradictory findings by linguists and psychologists? Interestly enough, the answer is found by taking a closer look at the pitfalls of empirical methodology. Most early studies in this area suffered from a wide range of methodological problems; so much so that at present most investigators in the field regard the findings of early studies as totally unreliable (see Cummins, 1976; Diaz, 1983). Many studies, for example, failed to control for group differences in socioeconomic status between bilingual and monolingual samples. As early as 1930, McCarthy pointed out that bilingualism in the United States was seriously confounded with low socioeconomic status. She found that more than half the occurrences of bilingualism in school children could be classified as belonging to families from the unskilled labor occupational group. Along the same lines, Fukuda (1925) alerted researchers to the fact that high-scoring subjects were mostly in the occupational and executive classes; he reported a significant high correlation between the Whittier (Socioeconomic) Scale and the Binet IQ measure for this population. Nonethless, prior to the early 1960's, most studies investigating the effects of bilingualism in children's intelligence did not account for bilingual-monolingual group differences in socioeconomic status. The negative findings, therefore, could be attributed to bilinguals' economic disadvantage rather than to their exposure to a second language.

A second major methodological flaw of early studies was that investigators consistently ignored children's actual degree of bilingualism or failed to measure children's relative competence and fluency in the two languages. An extreme example is a study done by Brunner (1929) where degree of bilingualism was determined by the foreigness of parents. Brunner divided his bilingual sample into three categories: (1) both parents born in this country, (2) one parent born here and the other abroad, and (3) both parents born abroad. The classification was simply (and naively) assumed to represent children's varied degrees of bilingual proficiency. In other studies, the sample's bilingualism was determined through family names or even place of residence! (see Darcy, 1953 for a review). For obvious reasons, it is impossible to ascertain if the bilingual subjects of many studies were indeed bilingual or just monolingual of a minority language who barely spoke the language of the cognitive tests they were given.

In the early 1960's, the field took a different (and fortunate) turn. Aware of the potential advantages of bilingualism for children's cognitive development, Peal and Lambert (1962) attributed the negative findings of early studies to the failure of researchers to differentiate "pseudobilinguals" from truly bilingual children. "The pseudo-bilingual knows one language much better than the other, and does not use his second language in communication. The true bilingual masters both at an early age and has facility with both as means of communication." (p.6). Peal and Lambert believed that while pseudo-bilingualism might be a serious problem that could result in intellectual retardation, genuine bilingualism may be a real asset to children's intellectual development. Because early studies had been lax in their definition of bilingualism and in the assessment of their sample's degree of bilingualism, negative findings could be attributed to a situation of pseudo-bilingualism.

To test their hypothesis, Peal and Lambert (1962) administered several measures of degree of bilingualism to 364 10-year-old children in Canada. Three tests were used to determine whether children were "balanced" bilinguals, that is, had age-appropriate abilities in both French and English, or whether they were monolingual. The final sample was composed of 164 children; 75 monolinguals and 89 (genuine or balanced) bilinguals. Children in the sample were administered a modified version of the Lavoie-Larendau (1960) Group Test of General Intelligence, the Raven's Coloured Progressive Matrices (a widely used nonverbal test of intelligence) and a French version of selected subtests of the Thurstone and Thurstone (1954) Primary Mental Abilities test.

Contrary to the findings of earlier psycological studies, the results of the Peal and Lambert study showed that bilingual children performed significantly better than monolinguals in most of the cognitive tests and subtests, even when group differences in sex, age and socioeconomic status were appropriately controlled. Bilingual children performed significantly higher than monolinguals on tests of both verbal and nonverbal tests was more clearly evident in those subtests that required mental manipulation and reorganization of visual symbols, rather than mere perceptual abilities. A factor analysis of test scores indicated that bilinguals were superior to monolinguals in concept formation and in tasks that required a certain mental or symbolic flexibility. Overall, bilinguals were found to have a more diversified pattern of cognitive abilities than their monolingual peers.

In 1962, after forty years of negative statements in the literature, linguist, psychologists and educators agreed on the fact that bilingualism has a positive effect on children's cognitive development.

The Cognitive Advantages of Bilingual Children

Perhaps the most striking aspect of Peal and Lambert's pioneer study is the fact that their positive findings have been replicated time and time again in the last two decades of research. When compared to monolinguals, balanced bilingual children have shown advantages in measures of conceptual development (Liedtke & Nelson, 1968; Bain, 1974), creativity (Torrance et al, 1970), metalinguistic awareness (Cummins, 1978), semantic development (Ianco-Worrall, 1972) and analytical skills in matrix transformation tasks (Ben-Zeev, 1977b). Other studies have shown that, within groups of bilingual children, their degree of bilingualism is positively related to several cognitive and academic skills. For example, children with higher levels of bilingual proficiency perform at a higher level than their peers on measures of analogical reasoning and tests of spatial relations (Diaz, 1982). Let us now review a sample of these findings with greater detail.

As will be discussed below, the ability to objectify language (commonly referred to as metalinguistic awareness) is a crutial ingredient in the development of intelligence. Consistently, bilingual children have demonstrated a very special sensitivity to the nuances and objective properties of language. In an experimental study of English-Afrikaans bilingual preschoolers in South Africa, Ianco-Worrall (1972) gave children the Semantic-Phonetic Preferences test. The test consists of eight sets of three words each; a typical set being the words cap, can and hat. Children were asked questions such as: Which word is more like cap, can or hat? Choosing the work can or the word hat respectively is an indication of the child's phonetic or semantic preferences in analyzing the similarity of words. The capacity to compare words on the basis of semantic dimensions is, developmentally, a more advanced ability than comparing words along a phonetic dimension. The results of the experiment showed not only that semantic preferences increased with age, but also that bilinguals outranked monolinguals in choosing words along semantic rather than phonetic dimensions. Bilingual children appeared two or three years ahead in semantic development.

A second study (Ben-Zeev, 1977b) done with Hebrew-English bilingual children provides further evidence for bilingual's special awareness of linguistic features. When compared to monolinguals, the bilingual children in this study showed significant advantages on symbol substutution and verbal transformation tasks. The symbol substitution task involved children's ability to substitute words in a sentence according to the experimenter's instructions. In a typical instance, children were asked to substitute the word "I" with the word "spaghetti." Children were given correct scores when they were able to say sentences like "Spaghetti am cold" rather than "Spaghetti is cold" or a similar sentence that , although gramatically correct, violated the rules of the game. The verbal transformation task involved the detection of changes in a spoken stimulus that is repeated continuosly by a tape loop. Both symbol substitution and verbal transformation tasks require enormous attention to the structure and details of language data.

Ben-Zeev noted that, throughout the study, bilinguals approached the tasks in a truly analytic way, attentive to unusual cues from both the tasks and the experimenter. The author explained these improved abilities in terms of bilinguals' confrontation with their two languages. She argued that, in order to avoid linguistic interference, bilingual children must develop a special sensitivity to linguistic feedback from the environment. This well-developed analytic strategy toward linguistic structures is then transferred to other structures and patterns in different cognitive tasks. Ben-Zeev summarized her results as follows:

> Two strategies characterized the thinking patterns of the bilinguals in relation to verbal material: readiness to impute structure and readiness to reorganize. The patterns they seek are primarily linguistic, but this process also operates with visual patterns, as in their aptness at isolating the dimensions of a matrix. (p. 1017)

Several studies have explored the relationship between children's bilingualism and cognitive processes involved in concept formation. In one study of French-English balanced bilingual children in Canada, Bain (1974) examined the effects of bilingualism on "discovery learning" tasks (see Gagne & Brown, 1961, for a detailed description of such tasks). The paradigm of Bain's study was to discover the rules that lead to solution of linear numerical problems such as:

A. 1,3,7,15,___

B. 1,3,6,10,___

Children were presented with two sets of items on 2 different days. On the second day of testing, children were told to "use the rules that you learned last day to help you solve the problems" (p.123). The task was chosen because it involved the ability to discover a rule and then use the rule to deduce a certain outcome. In Piagetian terms, the task involved concept formation abilities such as classification and generalization of rules. Throughout the study, bilingual children showed superior performance on several concept formation abilities. For example, on the average, bilingual children were able to discover the additive rules eight minutes earlier than the monolingual children in the study. Similar concept-formation advantages have been observed by Liedtke & Nelson (1968)in bilingual first-graders on concepts of linear measurement.

Most theorists of intelligence (e.g., Guilford, Spearman, Piaget) have stressed the central role of analogical reasoning in human cognition. It is appropriate, therefore, to conclude our brief review of the empirical literature by pointing out the positive relationship between childhood bilingualism and the capacity to reason by analogy. In a longitudinal study of one hundred Spanish-English bilingual Children, ages five to seven, the present author investigated the effects of learning a second language on analogical reasoning ability. Children were asked to complete sentences such as,

A. The princess is beautiful, the monster is ________

B. Snow is ice, rain is __________

The results indicated that children with greater bilingual proficiency scored significantly higher on the analogy test. Furthermore, progress in the second language during the course of one academic year produced significant increases in children's analogical reasoning abilities as measured at the end of the one-year study.

In conclusion, the last two decades of educational and psychological research have consistently indicated that bilingualism promotes the development of children's cognitive abilities such as metalinguistic awareness, concept formation and analogical reasoning. Moreover, studies of cause-effect relations using longitudinal data present bilingualism as the causal factor affecting children's intelligence. The question remains, however, as to *how* or *why* bilingualism has such effects on children's cognitive development. We turn now our attention to such question.

Three Explanatory Hypotheses

In the present literature, it is a well established fact that bilingualism has a positive effect on children's intellectual development. On the other hand, little is known as to how or why it happens. The gap in our knowledge is due in part to the fact that research has focused mostly on *outcome* rather than *process* variables. That is, most studies of bilingual children have examined the outcome of children's performance on a wide range of cognitive and academic tasks, rather than examining children's performance in process. It is not clear, therefore, whether bilingual children approach and solve cognitive development triggered by the bilingual experience.

The almost exclusive attention to balanced bilingual children has yielded information only about the final product of second language acquisition in childhood. There is virtually no information about the processes (or struggles!) that a young child might go through while beginning to learn the second language, nor how the cognitive effort involved might affect a child's cognitive development. Due to a lack of empirical evidence, the processes will be presented as hypotheses pending empirical observation and verification.

1. Two Worlds of Experience

Language is certainly much more than an arbitrary set of symbols arranged according to grammatical rules. Above all, language is the most important vehicle of human communication and, as such, contains the history and living experiences of a given speech community and culture. At the very heart of bilingualism, there is a bicultural experience. By learning a second language, the bilingual child is exposed to the perceptions and awareness of a different culture.

Two languages are different not only on account of their different grammars and vocabularies. The difference between two languages also represent deeper cultural differences that the bilingual child must assimilate and accommodate to in order to achieve proper mastery of the two languages. In Arsenian's (1937) words:

> The degree of difference between the two languages of a bilinguist is important not only from the point of view of the learning mechanism, but also of the thinking process...the difference between two languages usually denotes a difference in the culture and civilization of the two people using them, and hence denotes also a difference in the connotation of words which will influence the direction and the content of thought in the two languages. (p.20)

The bilingual-bicultural child is able to experience the world from two different perspectives. This possibility touches a central process of cognitive development. According to the famous Swiss psychologist Jean Piaget, young children are by nature egocentric. By egocentric, Piaget did not mean selfish or self-centered in a moral sense. Rather, Piaget meant that children's intelligence is seriously limited by their inability to take the perspective of another person. In Piagetian terms, intellectual development is marked by a "decentering", that is, a gradual movement away from one's own limited point of view towards an increasing awareness and coordination of different perspectives. Most likely, the bilingual-bicultural experience forces young children to decenter and move out of egocentric perspectives at a much earlier age than their monolingual peers.

2. Code-switching

Code-switching refers to the observation that bilinguals can move from one language to the other with relative ease. As an explanatory hypotheses, code-switching was proposed first by Peal and Lambert (1962) when explaining their pioneer findings.

The investigators believed that the possibility to change linguistic codes while performing cognitive tasks gave bilingual children an added flexibility that monolingual children did not enjoy. In Peal and Lambert's words:

> The second hypothesis is that bilinguals may have developed more flexibility in thinking...bilinguals typically acquire experience in switching from one language to another, possibly trying to solve a problem while thinking in one language and then, when blocked, switching to the other. This habit, if it were developed, could help them in their performance on tests requiring symbolic reorganization since they demand a readiness to drop one hypothesis or concept and try another.(p.14)

More often than not, errors in cognitive and academic tasks are caused by children's perserveration on the wrong hypotheses. Bilingual code-switching might indeed facilitate the development of a more flexible "mental set" to approach cognitive tasks. Furthermore, when a bilingual child is frustrated or blocked when performing a task verbally, he has the possibility of switching to the second language, starting the problem once again with a fresh and different perspective.

The claim that code-switching might facilitate the development of a more flexible mental set or approach to cognitive problems is, indeed, a very attractive hypothesis. Unfortunately, the literature contains only one datum of empirical observation to support such contention. In support of their explanatory hypothesis, Peal and Lambert (1962) cited the case of a Gaelic-speaking boy eleven years old (originally cited in Morrison, 1958) who had just taken a nonverbal test of intelligence. According to Morrison, when the boy was asked whether he had done his thinking in Gaelic or in English, the boy replied, "Please Sir, I tried it in the English first, then I tried it in the Gaelic to see would it be easier; but it wasn't so I went back to the English" (p.280). The boy's candid and fascinating reply suggests that code-switching does take place while performing cognitive tasks, even while performing nonverbal tests of intelligence! The reply offers no information, unfortunately, as to whether such language switch in fact facilitated the manipulation of visual-spatial symbols in the test.

3. Objectification

On many different studies, bilingual children have shown a particular advantage on measures of metalinguistic awareness. Once again, metalinguistic awareness refers to the ability to analyze objectively linguistic output; that is, "to look at language rather than through it to the intended meaning"(Cummins, 1978, p.127). The third hypothesis claims that bilinguals' objectification of language is conducive to higher levels of abstract thinking and concept formation.

When learning to drive a car, discrete actions are learned and gradually coordinated until they become an organized pattern of automatic actions. In driving a car, therefore, learning proceeds from the conscious and objective (not to mention clumsy!) to the unconscious and automatic. The development of intelligence, however, is not like learning to drive a car. In many instances, cognitive development is the product of objectifying concepts and abilities that are rather automatic and beyond deliberate control. Children's use of the word "because" is a case in point (see Vygotsky, 1962). Before entering school, children have been using the word "because" for years, and quite correctly in the context of their discourse. Even though the word "because" is used automatically and rather well, experimental studies show that young children do not fully master the concept embodied by such word. For example, when asked why a child fell from a bicycle, a preschooler is likely to answer "because he broke his leg." Through formal instruction and conflict with adult thinking, children are gradually forced to become aware of their automatic concepts and mental operations. Only through this objectification process, children are able to bring their concepts to a higher level of abstraction, ensuring proper use of those concepts they already possess but do not fully master.

Bilingual children have two words for each referent and early on are forced to realize the conventional nature of language. Furthermore, as Vygotsky (1962) suggested, since bilinguals could express the same thought in different languages, a bilingual child would tend to "see his language as one particular system among many, to view its phenomena under more general categories, and this leads to an awareness of his linguistic operations" (1962, p110). The awareness of another language ultimately leads to an awareness of one's own language. For bilingual children, such objectification of otherwise automatic linguistic symbols ignites the motor of intellectual development and abstract thinking.

Finally, the objectification hypothesis recognizes that exposure to a second language leads not only to knowledge of a different language and culture, but also to self-knowledge. Such claim echoes Goeth's famous dictum, "He who knows no foreign language does not truly know his own."

The Case for Bilingual Education

The cognitive and academic advantages observed in bilingual children are usually the result of "additive" rather that "subtractive" bilingual situations. In other words, bilingualism promotes the development of cognitive abilities when the child's two languages are both developing and functioning in parallel (additive) rather than when mastery of a second language is achieved at the expense of competence in the fist language (subtractive). The product of subtractive bilingual situations is a "semlingual", that is, a child who, for a good number of years cannot function adequately in either language. The results of semilingualism are, indeed, cognitive and academic retardation.

Close to four million children in the U.S. are non-native speakers of English; the majority of these children are natives of the Southwest. These children are learning or acquiring English as their second language in school and other less formal settings. If educated bilingually, these children will participate in the cognitive advantages of a truly bilingual-bicultural experience. On the other hand, if formal education does not take into account their native language nor promotes the development of both languages in parallel, these children will be at a high risk for semilingualism. Needless to say, unless educated bilingually, these children will be at a high risk for cognitive and academic deficits.

Bilingual education is, first of all, a right: The right of several million American children who are non-native speakers of English and who are, by law, entitled to an education. Bilingual education is legally endorsed, and rightly so, as the only viable alternative to teach these children the majority language and ensure at the same time their fair participation in the educational process. In conclusion, however, I would like to endorse bilingual education under a different light. I would like to present bilingual education not only as a right, but also as an excellent tool to enhance the academic and intellectual potential of our children, whether our children are native speakers of Navajo, Spanish, English or Vietnamese.

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A SPANISH-LANGUAGE PRESCHOOL PROGRAM

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Carpinteria Unified
School District

CARPINTERIA UNIFIED SCHOOL DISTRICT

Purpose of the Program

The major goal of the instructional approach of the project is to bring Spanish dominant preschool children entering kindergarten up to a level of readiness for school which compares favorably with the level attained by the English-speaking children in the community of Carpinteria.

This goal is achieved by developing skills in four major areas for the project participants. They are:

1. Developing oral language skills in Spanish to as high a degree as possible;
2. Developing cognitive and developmental skills associated with preschool curriculum;
3. Equipping each child with a repertoire of successful learning strategies with an emphasis on organizational skills;
4. Establishing a healthy self-concept by providing a positive social and emotional environment.

The project model emphasizes first language development to acquire the skills listed. This is based on the findings of Benjamin Bloom, University of Chicago, and on the work of Jim Cummins, University of Alberta, Canada. According to Bloom, in regard to academic achievement, at least one-third of the development of a child by the age of eighteen years has taken place prior to the child's entrance into the first grade of school. Furthermore, Bloom notes that the more able students in schools are those who demonstrate a high level of verbal ability in cognitive situations. Cummins' research indicates that a high degree of first language ability is necessary for optimum second language learning. The implication is that the development of language in children, the first language according to Cummins, is crucial to success in school, and should be in place before entry into first grade.

Program Treatment

A continuum of preschool skills designed by the project staff is used to implement the four major areas on which the project concentrates to bring project participants to a state of school readiness. The continuum includes activities that develop social and emotional goals; intellectual, cognitive, and communication goals; and physical development, health, and safety goals. The classroom is organized to include centers for blocks, games, math, library and language, science, listening-viewing, arts and crafts, and a play house. A typical day's instruction is as follows:

Daily Schedule

8:30 - 8:35	Greeting "Buenos dias" children are all together in a large group.
8:35 - 9:00	Large group concept time (12 children, 2 adults). Half the class is in the large group area. Concepts include: language, colors, shapes, prepositions. Small groups. The other half of the class is divided into three small groups (four children to one adult). Small groups work on concepts discussed in large group plus other skills, i.e., cutting, copying, listening, remembering.
9:00 - 9:30	Groups trade places with one another. Children who were in small groups now go to the large group area, and the other children go to their small groups.
9:30 - 9:55	Outdoor play on kindergarten playground.
9:55 - 10:00	Bathrooms
10:00 - 10:20	Snack Four tables - snack time is an important time for language development.
10:20 - 10:30	Library time Children sit with teachers and rest and look at books quietly.
10:30 - 11:10	Free choice activities Small books, puzzles, art, dramatic play (i.e., house play), manipulative tasks (cutting, pasting, playdough), patio (water or sand play, large blocks, easels). Children choose the activities they want to participate in and move throughout the room freely.
11:10 - 11:15	Clean up
11:15 - 11:40	Story; music

All activities are developed in Spanish and presented with a multicultural emphasis and utilization of the cultural heritage of the students.

Toward the end of the school year, at least by April, a regular English language time is incorporated into the students' program. Lessons include:

- Total physical response activities
- Listening activities such as stories, music, directions
- Learning to sing songs, recite rhymes, games
- Viewing films, filmstrips
- Opening types of activities

Opportunities for natural exposure to English are provided throughout the year. For example, during recreational times, the Spanish dominant children mix with English dominant children on the playground. Activities for natural exposure to English also include:

- Field trips to the community (fire stations, etc.)
- Integrated play activity with kindergarteners
- Coordinated visits to English-speaking preschool programs

Experience has demonstrated that children who enter school without a firm grasp of Spanish tend to mix the first language with the second language, English. There is therefore an emphasis on keeping languages separate to develop an awareness within the students of the appropriate usage of each language and to avoid the mixing of both. This approach complements the existing kindergarten through grade six bilingual programs in the district: from kindergarten through grade two, there is cognitive basic skills development in the students' first language; in grades three and four, there is a transference and extension of the cognitive basic skills into the second language; and in grades five and six, students are exited into a regular program in the second language.

Although the prime goal for the project participants is to increase their intellectual capacity to learn by developing the first language to as high a degree as possible, a facility to acquire English also results from the instructional approach. This has been demonstrated by previous project participants.

Program Outcomes

An evaluation of program outcomes was conducted to measure student progress in school readiness, academic skills in language and math, and oral English proficiency.

Instrumentation--School Readiness Inventory. The SRI is a criterion-referenced test designed to assess a child's readiness for school in the areas of fine motor abilities, attending skills, and concept development. The SRI is administered in either Spanish or English depending on the student's language dominance. The Carpinteria School District has used the SRI for the past 12 years.

El Circo. El Circo is standardized, norm-referenced achievement test which assesses student skills in language and math.

Bilingual Syntax Measure. The BSM is a state-designated instrument which assesses oral English proficiency.

The sample. In addition to students who participated in the Carpinteria Spanish language preschool, three other groups of students were identified for comparison purposes.

1. Spanish dominant students attending any other preschool
2. Spanish dominant students who did not attend preschool
3. English dominant students

Findings

School readiness. The results of the School Readiness Inventory displayed in Table 1 clearly show that Spanish dominant students who do not attend preschool or who attend a preschool where instruction is usually provided in English do not enter kindergarten with the same level of readiness skills as English dominant students. However, the readiness skills of the 22 Spanish dominant students who entered kindergarten in the fall of 1982 after one year of preschool instruction in Spanish almost equal the English dominant students' mean score.

TABLE 1

School Readiness of Kindergarten Children

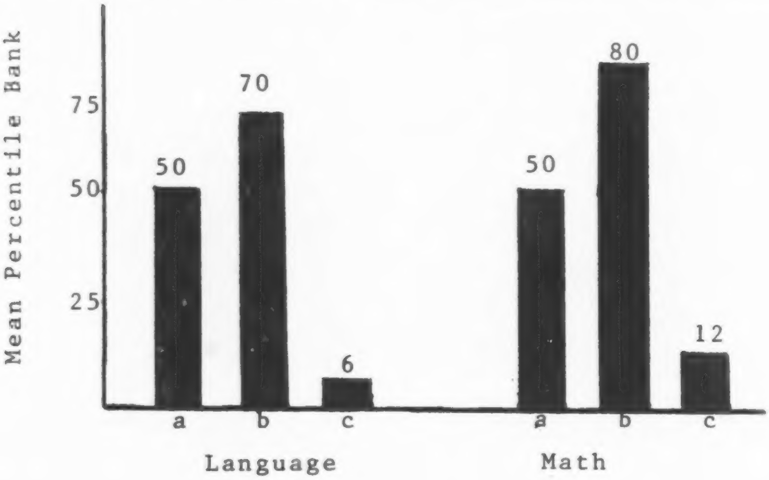
Students	SRI Score	N	SD
Spanish dominant, not attending preschool	12.1	43	*
Spanish dominant, English preschool	14.8	59	*
Spanish dominant, Spanish preschool	21.6	22	*
English dominant	23.0	505	5.9

*Not computed

Academic achievement. Spanish dominant students' academic skills in language arts and mathematics in Spanish were assessed using the El Circo test. Results, displayed in Figure 1, clearly show that the students who participated in the Spanish language preschool program exceeded expectations established by the norming population. Spanish dominant students who participated in other preschool programs where English was the primary language of instruction remain mired in the first quartile.

FIGURE 1

Academic Achievement of Spanish Dominant Students



a. Norming Group
b. Spanish Preschool, June 1982 (N=22)
c. Other Preschool, June 1982 (N=12)

Oral English proficiency. The oral English proficiency of all students whose home language was Spanish was assessed upon enrollment in kindergarter using the Bilingual Syntax Measure (BSM).

Prior to the fall of 1982, 42 percent of the Spanish dominant s students entering kindergarten in Carpinteria scored at or above Level 3 (survival English) on the BSM. In the fall of 1982, 76 percent of the Spanish dominant students who had participated in the Spanish language preschool program scored at or above Level 3, while only 35 percent of the remaining Spanish dominant students reached that level.

Discussion

The program results in the areas of school readiness and academic achievement are not surprising. Students who are instructed in the language with which they are most familiar (in this case, Spanish) will develop academic skills and concepts more rapidly than if they were instructed in another language.

The improved oral English proficiency of the project students is somewhat surprising, however, since project participants received almost all of their instruction in Spanish. A possible explanation is suggested by Steven Krashen who states that second language acquisition is dependent on appropriate exposure to comprehensible second language input--language that the student can understand. One way that input becomes comprehensible to students is when the second language input deals with topics familiar to the students. In the case of the children who participated in the Spanish language preschool program, it seems possible that their improved conceptual knowledge allowed them to understand more of the English they were exposed to outside school.

POSTSCRIPT (June, 1985)

Here is an update of statistics gathered at the Early Childhood Learning Center (Canalino School) where all K-students in the Carpinteria Unified School District attend. The Canalino Title VII preschool program has started an upward trend in improved achievement at those levels for Limited English Proficient (LEP) students whose home language is Spanish.

In kindergarten, especially, one can see in the Tables tremendous incline in test scores since 1982 on the California Achievement Test (CAT). The May 1982 testing was of our first preschool group to enter kindergarten. The results were disappointing as the tables and graph show. The first group, however, had an abbreviated preschool program of only a half-year's instruction. We expected a sharp upturn the following year in May 1983 testing. This preschool group had had a full year's instruction and demonstrated excellent skills upon entry into kindergarten. We did not get the results we expected, largely, I believe, because of two new bilingual teachers we employed who unfortunately had little concept of teaching a class, let alone a bilingual one (each has since departed from the teaching profession). May 1984 testing presented us the upturn we had been expecting since the excellent School Readiness Inventory (SRI) results of the Canalino Title VII preschool had begun to be achieved. One notes a sharp incline in the tables and graph.

In May 1985, we see another sharp incline. The results of this 1984-85 year are fantastic. They were achieved, I believe, because we extended the methods of the Canalino Title VII preschool to the kindergarten program itself. Before this year we had used the traditional transitional bilingual classroom approach in kindergarten. Also, as demonstrated with the Canalino Title VII preschool in previous years, English language development continued to develop for the kindergarten class of 1984-85, despite the extensive use of Spanish as the instructional medium of the students. Of particular interest with this group, too, is that the entry level scores are extremely low on the Bilingual Syntax Measure - English (BSM). Remember, that the preschool was in transition during the 1983-84 year becoming a State preschool program in the middle of the year. The Canalino State Preschool operated for only 5 months and served only a few LEP children in the transition period. Most LEP children were in another preschool program or in none at all and the English BSM entry scores in kindergarten for the 1984-85 school year took a nose-dive. Perhaps this is evidence that the home language approach of the Canalino Title VII preschool had, in fact, enhanced the English language development of those students. By the end of the kindergarten year, however, the BSM English scores are healthy using the preschool approach in a kindergarten classroom.

The first grade scores also show a sharp steady incline since the inception of the Canalino Title VII preschool. The May 1985 results are tremendous. 93% of the LEP students scored on or above the 50th percentile on the CTBS Espanol reading test. Also, 97% of LEPs completed both the Cascabel and Trampolin readers of the Santillana reading series. Previous to this, the best we had ever done at the Early Childhood Learning Center (Canalino School) was 40% of the LEP students completing both of these readers in first grade. Unfortunately, I do not have English language updates for the students past first grade or even for the current group of first graders. Our district has cut back severely on bilingual assessments except in those areas which I have personally monitored in the interest of the work we have pioneered at our school. I can state that the three bilingual teachers at the first grade level report that this is the most proficient English speaking group of LEP first graders they have ever worked with. Most are considered to be FEP by now. We also have videotaped some of them using English for a film we are developing.

CANALINO ELEMENTARY SCHOOL
AND
EARLY CHILDHOOD LEARNING CENTER

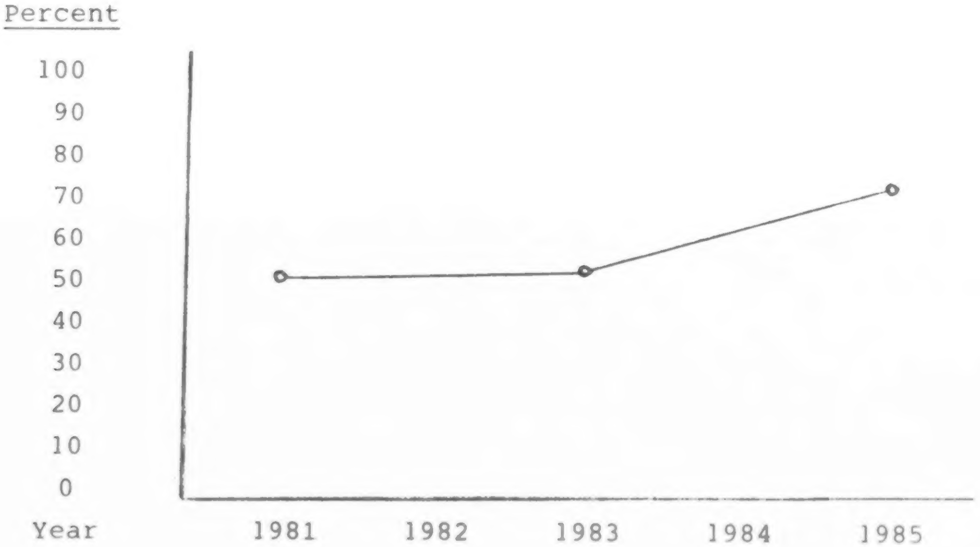
FIRST GRADE CALIFORNIA ACHIEVEMENT TEST (CAT) MATH RESULTS FOR LIMITED ENGLISH PROFICIENT (LEP) STUDENTS IN THE CARPINTERIA UNIFIED SCHOOL DISTRICT

FIRST GRADE MATH

Year	Number of Students	Percentile Rank	Percent Scoring On Or Above 50th%ile
5/85	41	54th%ile	76%
5/84	(California Achievement Test Not Used)		
5/83	36	51st%ile	56%
5/82			
5/81	35	43rd%ile	51%

FIRST GRADE CALIFORNIA ACHIEVEMENT TEST MATH

Students Scoring Above The 50th%ile



CANALINO ELEMENTARY SCHOOL
AND
EARLY CHILDHOOD LEARNING CENTER

KINDERGARTEN CALIFORNIA ACHIEVEMENT TEST (CAT) RESULTS FOR LIMITED ENGLISH PROFICIENT (LEP) STUDENTS IN THE CARPINTERIA UNIFIED SCHOOL DISTRICT

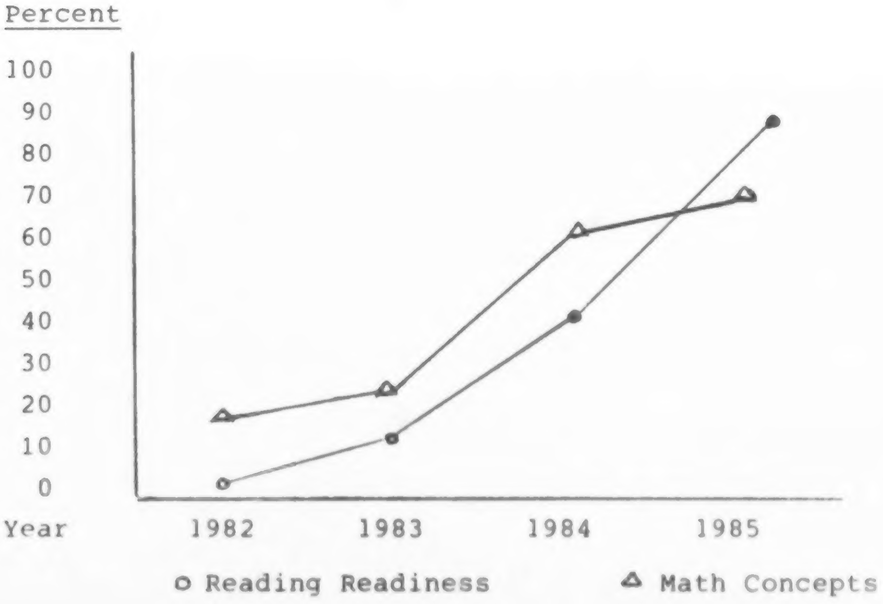
KINDERGARTEN READING READINESS

Year	Number Of Students	Percentile Rank	Percent Scoring On Or Above 50th%ile
5/85	37	68th%ile	89%
5/84	35	34th%ile	40%
5/83	39	10th%ile	13%
5/82	36	8th%ile	0%

KINDERGARTEN MATH CONCEPTS

Year	Number Of Students	Percentile Rank	Percent Scoring On Or Above 50th%ile
5/85	37	71st%ile	76%
5/84	36	60th%ile	61%
5/83	39	25th%ile	23%
5/82	37	25th%ile	19%

KINDERGARTEN CALIFORNIA ACHIEVEMENT TEST
LIMITED ENGLISH PROFICIENT STUDENTS SCORING ABOVE THE 50TH%ILE



KINDERGARTEN BSM SCORES 1984-85 FALL AND SPRING

STUDENT	Fall	Spring
#10	3	5
#11	3	4
#12	1	4
#13	3	4
#14	3	4
#15	4	4
#16	3	4
#17	3	4
#18	1	4
#19	2	4
#20	1	4
#21	1	4
#22	1	3
#23	2	3
#24	1	3
#25	1	3
#26	1	3
#27	1	3
#28	3	3
#29	1	3
#30	1	3
#31	1	3
#32	1	3
#33	1	3
#34	2	3
#35	1	3
#36	1	2
#37	1	2
#38	1	2
#39	1	2
#40	1	2
#41	1	2
#42	1	2
#43	1	1
#44	1	1

BSM FALL 1984

	#	%
Level 5	0	0
Level 4	1	3%
Level 3	7	20%
Level 2	3	8%
Level 1	24	69%

BSM SPRING 1985

	#	%
Level 5	1	3%
Level 4	11	31%
Level 3	14	40%
Level 2	7	20%
Level 1	2	6%

Level 5	Proficient English
Level 4	Intermediate English
Level 3	Survival English
Level 2	Receptive English
Level 1	No English

Number of Students Advancing

3 Levels: 4
2 Levels: 13
1 Level : 14
0 Level : 4

Number of Students Declining: -0-

CANALINO ELEMENTARY SCHOOL
AND
EARLY CHILDHOOD LEARNING CENTER

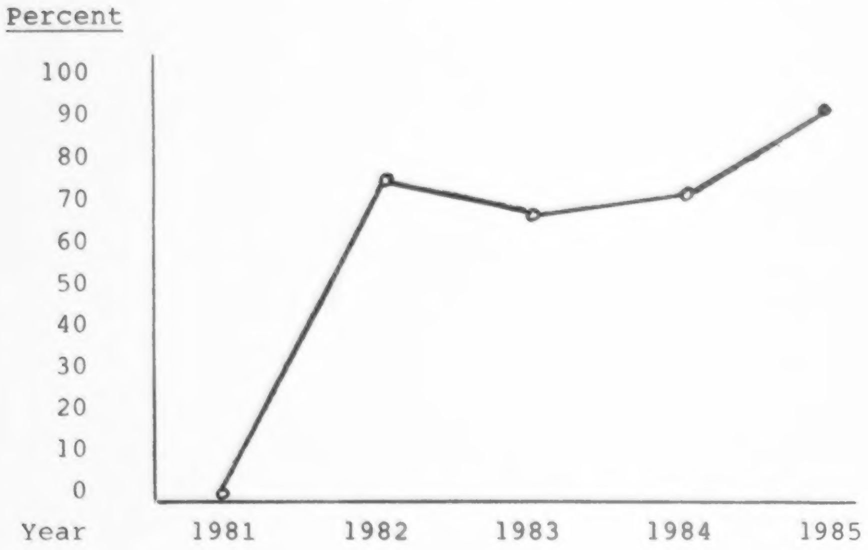
FIRST GRADE CALIFORNIA TEST OF BASIC SKILLS (CTBS) ESPANOL READING RESULTS FOR LIMITED ENGLISH PROFICIENT (LEP) STUDENTS IN THE CARPINTERIA UNIFIED SCHOOL DISTRICT

FIRST GRADE READING

Year	Number Of Students	Percentile Rank	Percent Scoring On or Above 50%ile
5/85	41	64th%ile	93%
5/84	30	61st%ile	76%
5/83	38	58th%ile	66%
5/82	29	59th%ile	76%
5/81	34	7th%ile	0%

FIRST GRADE CALIFORNIA TEST OF BASIC SKILLS ESPANOL READING

Students Scoring Above The 50th%ile



RECOMMENDATIONS

Because this effort by the Advisory Committee represents only a beginning inquiry into this important area and because little research on the language acquisition of infants and young children has focused on child care and preschool programs, the Committee's recommendations are general rather than prescriptive, tentative rather than definitive, focused on the future rather than celebratory of the present.

Also, the Committee has here, and throughout the report, tried to separate the discussion of educational practice and children's ability to learn from political arguments about U.S. language policy. We recommend basing child care curriculum decisions on research and successful practice rather than on adults' political arguments.

1. Begin with what we know. While the research into the potential for bilingualism in infants and young children is slight, there is some of it upon which we can draw tentative conclusions and determine promising areas for research and for curriculum. We are not, as a profession, entirely ignorant of what is possible and of what works.

2. Focus current research resources on these issues. The Committee recommends that state research resources, such as the Policy Seminar of the University of California system, focus on these questions. Also, through the Committee, through the State Department of Education, and through professional organizations and foundations, encouragement should be given to researchers to investigate the questions raised in this report. These are issues raised at the conference and others that arise from the concerns of parents and program directors.

(The issues raised at the conference, again, were roughly these: can young children in child care master more than one language; if so, what are the best methods to teach them; if young children in child care do not learn English, have they missed a unique learning opportunity and will their cognitive development and their school success suffer; what benefits accrue to young children from non-English speaking households who are immersed in English in their child care program; is child care a suitable place to teach a second language to an infant from an English speaking household?)

3. Encourage researchers to use the many child care programs in California as settings for research. Participants at the Fresno conference were surprised to learn that many researchers on early learning acquisition had never visited a child care program; much of the research presented occurred in either lab or home settings. (More than 1,000 centers and 700 family day care homes are linked by direct contract to the subsidized child care system. An additional

5,000 centers and 30,000 family day care homes are licensed in the state.) The Advisory Committee must work with institutions of higher learning to promote the idea of using child care programs as the locus of research on language development in particular and child development in general.

Given that California's subsidized child care programs enroll about 75,000 children daily and the State Preschool programs serve an additional 20,000 four-year olds during every school year, the opportunities for longitudinal research are enormous. A few programs could adopt specific instructional models for several years; immediate data could be evaluated; and longitudinal data could be collected regularly. The Perry Preschool Project in Ypsilanti has provided policy makers and educators with a wealth of data for the past ten years. We should now be thinking ahead to our needs in the 1990's for evaluation data that will assist us to provide the best possible programs for the many children who will be in our state programs then.

4. Establish procedures to assist child care teachers and providers to conduct small research projects of their own. The success of Jim Campos and the Carpinteria school district (see paper included in this report) in gathering data on which to make program decisions is inspiring to all child care professionals. The work of the Bay Area Writing Project, at U.C. Berkeley, to encourage and to provide assistance to teachers who want to design and carry out small research projects should be made available to child care programs.

5. Continue to provide forums where researchers and practitioners can meet. During the space of one month, the Advisory Committee hosted its conference in Fresno, and the Child Development Division of the State Department of Education held a conference in Los Angeles on special needs children. Both conferences were enthusiastically received. In addition to continuing its own work in this area and to encouraging the SDE to provide additional conferences, the Committee also encourages major organizations such as the California Association for the Education of Young Children (and its national parent organization) to invite researchers to their conferences to meet with child care professionals to discuss these issues.

6. Child care personnel whose programs include language minority infants and young children should be aware of the research findings presented in this report. The Committee will provide distribution within its budget and recommends that the Department of Education's child development staff provide the report to contractors and utilize it when giving technical assistance to them. The Committee will also work with family day care associations, day care and preschool center associations, and the Child Care Resource and Referral Network to get the report into the hands of other child care professionals whose programs include language minority children.

In addition to this report, the Committee also has video tapes of most of the Fresno presentations. These tapes are available for use in college classrooms, in staff development programs, at conferences, and for personal viewing.

7. Teachers and care providers should have current information on issues concerning first and second language acquisition as it relates to immigrant families and to English speaking families. The Committee will work directly with journal and newsletter editors (*Children's Advocate*, *Young Children*, *Child Care Information Exchange*, and others) to focus their attention on these issues and encourage them to solicit and publish articles on research and practice. Also, the Advisory Committee will work to distribute the video tapes of conference presentations, in part because many child care program staff members do not have time for a great deal of reading.

In addition, recognizing that teachers do not have a great deal of time for reading, the Advisory Committee encourages professional and governmental organizations such as DSS Licensing, SDE Child Development Division, Commission for Teacher Credentialling, the Association for the Education for Young Children, and the Child Development Administrators Association to include discussions and information about these issues in the conferences and meetings they conduct.

8. Early childhood programs should find ways to assist immigrant and other non-English speaking families to maintain their home languages and to help their children develop it to their fullest capacity. Of course, the simple way for all programs to do this, no matter what their curriculum, is to avoid denigrating the home language. In addition, using the resources of the public schools, libraries, community organizations, and bookstores, child care programs should strive to send books and other materials in the mother tongue home with the children for parents and children to use; also, child care programs should encourage all parents to talk to their children, to build oral language skills, in whatever language. [The Committee is pleased to note that child care programs can call upon the International Child Resource Institute, in Berkeley, for assistance in locating materials for parent-child interaction in language other than English.]

At the same time, the Committee hopes that community resources can assist all members of the family to learn English, through adequate adult education programs and through coordination and cooperation among home, school, adult education, and the child care program.

9. All children should have the opportunities to learn second languages or foreign languages at the earliest optimum age. While more research is needed on the best ways to teach a second language to young children, as research becomes available, it should be shared widely in day care, nursery schools, and in public and private schools. Second language acquisition should not be reserved

for our poorest immigrant families and our richest privately educated families. It should be the province of all children in all educational settings.

10. In early childhood programs that do attempt to develop both the child's first language and English, staff should strive to achieve "balanced bilingual" status in the children. The work of James Cummins and others (see bibliography) provides the tools a teacher or caregiver needs to assess children's success at achieving this balance. (See papers by Dave Dolson and Eugene Garcia for a discussion of this concept: pages 6-40 & 44-55 of this report.)

11. Include the socialization process in any bicultural program planning for language minority children. ("Socialization" includes a child's learning of behavior, particularly his or her place in relation to adult relatives, siblings, and other adults responsible for the child's welfare.) Every culture has its values, customs, and relationships. Early childhood education programs (infant care, child care, and preschool) must find ways to develop a child's skills, including language skills, without contradicting those cultural values and relationships. The bridge between the home and the early childhood program must be constantly open, and sensitivity to a child's socialization process is central to maintaining a home-childcare partnership.

Professor Wong-Fillmore's paper presents research indicating that cultural and linguistic pluralism in early education programs supports family unity and becomes, in effect, pro family.

12. In programs teaching two language, separate the two languages clearly and distinctly. Barry McLaughlin's paper reports clear research findings: a child learns two languages better if the two are separated by consistent patterns. For example, one staff member always speaks L1, another staff member always speaks L2. Or, in specific areas of the center, adults always speak L1, and in other areas of the center, adults always speak L2. It is also possible to divide the two languages into time periods: mornings are for L1, afternoons are for L2.

13. In some circumstances, it is appropriate for an early education program to be conducted solely in the children's mother tongue. The evidence from the Carpinteria school district program on its Spanish language preschool and kindergarten program is convincing that such a program can be appropriate. (See Jim Campos's paper.) If school success and the eventual mastery of English are major goals of an education program, then the Carpinteria program bears study and replication.

14. Give particular attention to studies that have come out of Head Start. These studies (cited in the bibliography and in Professor Eugene Garcia's paper) are particularly useful because they focus on a low-income population similar to families who use the state's subsidized child care and State Preschool program, because they are

classroom based, and because they draw conclusions applicable to child care settings.

15. A second conference and additional materials are in order: to focus upon bridging the linguistic gap between early education programs and elementary school programs; to develop modalities for bringing research to practitioners in the most practical and effective manner; and, to explore methods for including families in the language acquisition process.

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